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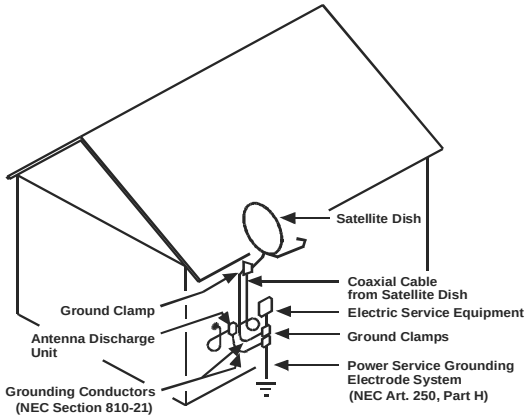
Safety Instructions

YOU SHOULD ALWAYS FOLLOW THESE INSTRUCTIONS TO HELP ENSURE AGAINST INJURY TO YOURSELF AND DAMAGE TO THE SYSTEM.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Use only attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as the power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

Note to the Satellite System Installer: This reminder is provided to call the satellite system installer's attention to Article 820-40 of the *National Electrical Code* (NEC) that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.


Satellite Dish
Coaxial Cable from Satellite Dish
Electric Service Equipment
Ground Clamps
Power Service Grounding Electrode System (NEC Art. 250, Part H)
Ground Clamp
Antenna Discharge Unit
Grounding Conductors (NEC Section 810-21)

SAFETY TIPS

- Unplug the receiver from the AC power outlet *before* cleaning.The use of accessories or attachments not recommended by the receiver manufacturer will void the *Limited Warranty.*
- Do *not* place the receiver in an enclosure such as a cabinet without proper ventilation.
- Do *not* stack the receiver on top of or below other electronic devices.
- Operate the receiver using *only* the type of power source indicated on the marking label. Unplug the receiver power cord by gripping the power plug, *not* the cord.
- Do *not* overload wall outlets or extension cords, as this can result in a risk of fire or electrical shock.
- *Never* insert objects of any kind into the receiver through openings, as the objects may touch dangerous voltage points or short out parts. This could cause fire or electrical shock.
- *Make sure* that the outdoor parts of the antenna system are grounded in accordance with local, state, federal, and *National Electrical Code* (NEC) requirements.
- Do *not* locate the antenna near overhead light or power circuits, or where it can fall into such power lines or circuits. When installing the antenna, take *extreme* care to avoid touching such power lines or circuits, as contact with them can be *fatal*.
- Do *not* attempt to service the receiver yourself, as opening or removing covers may expose you to dangerous voltage, and will void the *Limited Warranty.* Refer all servicing to authorized service personnel.
- Use an outlet that contains surge suppression or ground fault protection. For added protection during a lightning storm, or when the receiver is left unattended and unused for long periods of time, unplug the power cord from the wall outlet, disconnect the lines between the receiver and the antenna, and disconnect the modem cable from the telephone jack. This will provide some protection against damage caused by lightning or power line surges.

Chapter 1

Introduction

WELCOME TO THE DISH NETWORK

Congratulations on choosing DISH Network. You are about to experience the excitement and convenience of Digital Broadcast Satellite (DBS) service. DBS delivers the very best in picture and sound quality. DISH Network consistently delivers state-of-the-art, satellite-delivered products and services — with high performance, ease of operation, and a wide variety of entertainment options.

Your new Personal Video Recorder (PVR) DishPVR receiver is totally state-of-the-art with two tuners for true picture-in-picture (PIP), DishPVR features, and a host of other features that make it the most versatile and exciting home entertainment device we have ever offered.

Plus, this receiver offers all the features you'd expect in a high-end satellite product, including a Ultra High Frequency/Infra-Red (UHF/IR) remote control, on-screen program information with search, theme-based program selection, Favorites lists, program locks, Dolby® Digital sound, and more!

In short, this DISH Network receiver is an exciting, easy-to-use device designed to entertain you today and for many years to come!

Tip: To begin enjoying your DISH Network service now, you must first order your programs (page 4).

IMPORTANT INFORMATION ABOUT THIS RECEIVER

- Always handle the DishPVR carefully. Avoid excessive shock and vibration at all times as this can damage the hard drive.
- If you have the receiver turned on and need to move it, unplug the receiver and *let it sit for at least one minute* before moving it.
- Do not install the receiver in any area where the temperature can be less than 40º F or more than 113º F while the unit is operating.
- If the receiver is cold to the touch, do not plug it in immediately. Let it sit *unplugged* at room temperature for at least 45 minutes before plugging it in.
- Avoid installing the receiver on top of another electronic device (such as a stereo receiver) as this can cause heat build-up and vibration.

CONVENTIONS USED IN THIS USER GUIDE

To make it as easy as possible for you to use this guide, we use the following conventions.

- When the guide says *Select*, it means to move the highlight to an on-screen option or a choice in a list, and press SELECT on the remote control.
- The names of all remote control buttons such as POWER are all uppercase.
- When the guide says to press remote control number buttons in a specific sequence, each button pressed is separated by a dash. Example: MENU-6-1 means that you press the MENU button, the 6 button, and then the 1 button.
- Remote control modes such as TV are in all capital letters. Example: SAT mode.
- Menus and options that appear on the TV screen are in bold type. Example: **Program Guide**.

HOW TO GET STARTED

If you are adding the receiver to an existing system, follow the instructions below. If you are installing a new system, follow the *Installation Instructions* that begin on page 97.

1. Connect your existing system to both the **Satellite In 1** and **Satellite In 2** connections. Also, connect **Satellite In 1** and **Satellite In 2** to the same device — for example, the same switch or LNBF. Connect a coaxial cable from the **TV Set Out** connection on the back of the DishPVR receiver to your TV (for more information on connecting the receiver to the TV, see "Back Panel Connections" on page 28). Make sure both the receiver and TV are plugged in and turned on.

   Note: When you first turn on the receiver, the green POWER light on its front panel will blink on and off for a few moments, while the receiver is turning on. You will then see a blank screen, followed by a message that the receiver is being initialized.

2. Perform a check switch by completing the following steps:

   a. Press the remote control MENU button. DOWN ARROW to **System Setup**, and then press the RIGHT ARROW.

   b. Press the remote control DOWN ARROW to **Point Dish**, and then press SELECT. The **Point Dish** screen displays. After the receiver measures the signal strength, you'll hear a tone from your television. Notice that the **Done** option on the **Point Dish** screen is highlighted.

   c. Press the remote control LEFT ARROW to highlight the **Switch** option and then press SELECT. The **Switch Matrix** screen displays. Notice that, once again, the **Done** option is highlighted.

   d. Press the remote control LEFT ARROW to highlight the **Check** option and then press SELECT. The **Check Switch** screen displays with a meter to show test progress. The tests may take a few minutes.

   e. When the receiver is finished performing the Check Switch, the **Switch Matrix** screen displays. Make sure the matrices for both are the same.

   f. As before, the **Done** option is highlighted. Press the remote control SELECT button twice to clear all menus from the television screen.

3. To enjoy all the many features of the DishPVR receiver, you must allow it to take a software upgrade (downloaded from a DISH satellite). You can use the receiver before this download completes, but its features are limited.

Your DishPVR will automatically begin taking this software upgrade. You can use the **Browse Banner**, **Program Banner** or UP and DOWN ARROWS to find programs to watch while this upgrade is taking place (for information on using these features, see *Chapter 4, Using the Receiver*). The upgrade takes about 45 minutes. If you don't want to watch TV during this upgrade, turn off the TV and the receiver. *Do not unplug* the receiver. The power button's green light will blink off and on until the software upgrade has finished.

If you want to see how the upgrade is progressing at any time, press MENU and select **System Setup** and then **Software Upgrade** or press MENU-6-7. Follow the on-screen instructions to install your software upgrade.

4. When the receiver is installed and has taken the software upgrade, and the channels display on the **Program Guide**, the next step is to order your programming packages (see the section titled *Ordering Your Program Packages* below). Now you are able to view most of the channels you ordered. Plus, you are able to view Pay Per View (PPV) events.

   - If you have a problem operating the system or receive an error message, use the *Troubleshooting Tables* beginning on page 135.
   - For complete information on using the remote control with this receiver, see *Using the Remote to Control the Receiver*, beginning on page 31. For information on using the remote to control other devices, go to page 84.

ORDERING YOUR PROGRAM PACKAGES

Tip: Make sure your System Information menu is displayed on the screen before you call to order your program package.

1. Press the System Info button to display the receiver's **System Information** menu on the TV screen. *Leave the menu open while you do steps 3 and 4, next.*
   Note: The information in the figure below is for example only. When you call the Customer Service Center, make sure to use the information displayed on your TV screen.

2. Call 1-800-333-DISH (3474) and tell the Customer Service Center the system has been installed and you would like to begin receiving services. A representative will explain the available program packages. Give the representative information from the **System Information** screen.
3. Your services will be turned on via the satellite signal. This process usually takes just a few minutes.
4. Press the remote control SELECT button to clear the **System Info** screen from the TV screen.

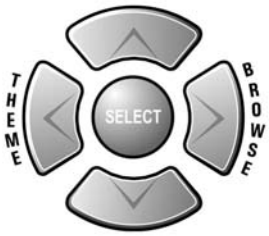
   Note: You may not be able to view all the channels you ordered until your receiver finishes taking the software upgrade described on page 3.
5. You are able to tune the receiver to the programs you ordered.

HOW TO FIND A PROGRAM TO WATCH

When your receiver has the necessary software upgrade, you can use the **Program Guide** to find programs to watch.

1. Make sure the receiver is turned on, with the green front panel Power light on. To do this, press the remote control POWER button. *Also, make sure the TV is turned on.*
2. Press the remote control GUIDE button to open the receiver's **Program Guide** on the TV screen.

3. Use the remote control UP/DOWN/LEFT/RIGHT ARROW buttons to move the highlight around the **Program Guide**, and to highlight a program showing *now.*
4. Press the remote control SELECT button to tune the receiver to the program you highlighted.



IF YOU RUN INTO PROBLEMS

There are problems you might run into that are very easy to solve. For example, to solve just about any problem, press and hold the receiver's front panel POWER button for about five seconds. The receiver's front panel lights should flash and the TV screen should go blank. Then, release the button. The receiver will re-initialize after a few minutes.

Here are some other common problem solvers.

- Make sure all cable connections are tight.
- Check the weather as heavy rain and snow or snow build-up on the satellite dish can cause loss of signal.
- Try solving problems yourself with our troubleshooting tables that begin on page 136.
- You can tune the receiver to DISH Network information channels for information about features and services. For more information on any specific feature or function, read *Chapter 4, Using the Receiver.*

Tip: Before you call our Customer Service Center, be sure you try the simple problem solving tricks described at right.

IF YOU STILL NEED ASSISTANCE

If problems remain, visit our home page on the Web at www.dishnetwork.com or call the Customer Service Center at 1-800-333-DISH (3474). The Customer Service Center also has information on professional installation of your satellite systems.

Chapter 2

Quick Tours

This chapter includes five short tours designed to help you quickly get started using the DishPVR Receiver's most important features.

Note: These tours assume that you have connected the receiver to an existing system, and that you have turned on both the receiver and the TV. They also assume you have taken the software upgrade described in the chapter titled *How to Get Started*. If you have not yet allowed your receiver to take this upgrade, follow the instructions on page 3.

Tour #1:	Explore the Menus	page 8
Tour #2:	Find A Program To Watch	page 12
Tour #3:	Have Fun With Live TV	page 15
Tour #4:	Find Programs And Record Them	page 19
Tour #5	Watch or Record One Program While Watching Another	page 21
Tour #6:	Record Two Programs While Watching a Third Recorded Program	page 23

TOUR #1: EXPLORE THE MENUS

Menus are what you use to control and customize the receiver. This short tour shows you how to open and move around the menus. It also provides a brief overview of what you can do with the menus.

1. Press the GUIDE button. This opens the **Program Guide** on the TV screen.

2. You can scroll through the **Program Guide** to find a program to watch. For now, though, please go on with this tour.
3. Press the remote control VIEW button to go back to viewing a program.
4. To open the **Themes** menu, press the remote control MENU button and the menu **TV Listing** highlighted displays. Press the RIGHT arrow, and then the DOWN arrow to highlight **Themes**. Press SELECT.

Tip: Press the remote control Left arrow

-or-

Press Menu-1-3 to open the Themes menu

5. Select the theme **Movies** to see a list of movies available for viewing.

6. When you are finished, select **Done** and then **Done** again to go back to watching a program.
7. Press the remote control MENU button and then select **Preferences** and then **Favorites** or press MENU-4-1. The **Favorites Lists** menu opens.

You can use Favorites Lists to make the **Program Guide** and other on-screen lists show only your favorite channels. For now, though, select **Cancel** to exit this menu. We will show you how to set up **Favorites Lists**, beginning on page 62.

8. Press the MENU button.

Tip: If you want to simplify the Program Guide so that you're seeing only information on the channels that interest you, it's easy. Just create a Favorites List (see page 62).

9. Select **Locks** and then **Channel Locks** or press Menu-5 and then select **Channel Locks**. This is an example of locks you can apply to keep other family members from viewing certain channels. There is much more you can do with Locks, but for now, select **Cancel** twice to go back to watching a program. We discuss **Channel Locks** on page 66.

10. Press the MENU button. Select **System Setup** and then **System Info** or press MENU-6-1.

    This provides access to **System Information.** If you need to call the Customer Service Center for any reason, you will most likely be asked for information from this screen.

11. Press CANCEL to go back to watching a program.

12. Press the MENU button.

13. Select **Timer** or press MENU-7 to open the **Timer** menu.

There's more to timers than just this menu because from the **Timer** menu, you can view and edit your existing Timers and create a new Timers. For now, select **Done** to go back to watching a program.

14. Press the MENU button.
15. Select **TV Listing** and then **PVR List** or press the MENU-1-1 to open the **PVR Record Event** menu.

16. Select **Cancel** to go back to watching a program.

This is the end of the tour on **Menus**. You will find more information on using menus in the section beginning on page 42.

Tip: Take a look at page 50 for more information on Timers.

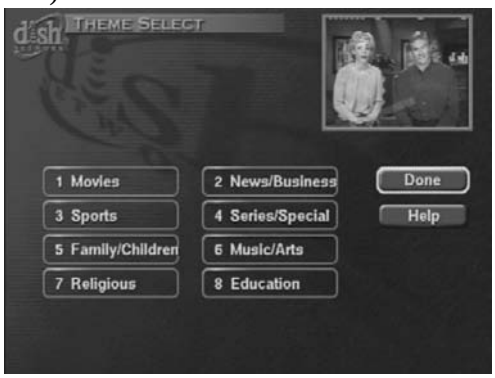
TOUR #2: FIND A PROGRAM TO WATCH

Finding a program to watch on the DishPVR receiver is easy and fun. In fact, you can do this several ways — with the **Program Guide, Browse Banner, Themes**, or by using the UP/DOWN/LEFT/RIGHT arrow buttons on the remote control. Here are the four ways to find programs to watch.

1. Make sure the receiver is turned on, with the green front panel Power light on and that the remote is in SAT mode. To turn on the receiver, press the remote control Power button. Also, make sure the TV is turned on.

2. The first way to find a program to watch is to press the UP or DOWN ARROW. This will change to the program on the channel above or below the one you were watching. You can continue pressing the UP or DOWN ARROW to find other programs.

3. The second way to find a program to watch is with **Themes. Themes** are lists of programs that are all members of the same group, such as movies or sporting events. To access **Themes**, press the THEME (LEFT ARROW) button.

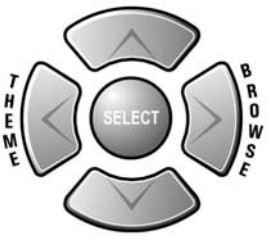


4. For example, move the highlight to **Movies** and press SELECT.
5. Select **Done** and then **Done** again to go back to watching a program.

Tip: Want to know how long the program will be on? Who are the people in the movie? What's this program about? Just press Info on the remote.

6. The third way to find a program to watch is by using the **Browse Banner**. Press the BROWSE (RIGHT arrow) button to open it. The top of the **Browse Banner** shows information about the program you're watching. The bottom left of the **Browse Banner** shows information on the program that is playing now on the same channel. The bottom right of the **Browse Banner** shows information on the next upcoming program on the same channel.

7. Press the UP or DOWN button. This changes the channel information shown at the bottom of the screen. If you press the UP arrow button, the bottom left of the **Browse Banner** shows you what programs are playing *now* on the channels above the one you are watching. Press the DOWN arrow button and you will see information on channels below the one you are watching. The bottom right of the **Browse Banner** shows information for the programs that are on next on the channels above or below the one you are watching — depending on whether you pressed the UP or DOWN Arrow.



8. Press the VIEW button to clear the **Browse Banner** from the TV screen.

9. The final way to find a program to watch is by using the **Program Guide**. To access it, press GUIDE on the remote.

10. Now you can use the UP/DOWN and RIGHT/LEFT arrow buttons and the PAGE UP and PAGE DOWN arrow buttons to move around the **Guide** and find a program to watch.

    Note: Once you find a program that interests you, press Select to view it. Notice that if you select a program that is not yet playing, the receiver will open a **Event Timers Create**. For more information on using **Timers**, see page 50.

This is the end of the tour on finding a program to watch. You will find more information on finding and viewing programs beginning on page 43.

Tip: Anytime you're in the Program Guide and want information on a program *before* you select it, just highlight the program to show the details on the upper left area of the screen. Press INFO if some information is hidden.

TOUR #3: HAVE FUN WITH LIVE TV

DishPVR features let you have fun with live TV because they put you in control. Is someone at the door or on the phone? Just press PAUSE on the remote. When you're ready to start watching the program again, press PLAY. You'll start up right where you left off without missing a minute of the program.This tour will show you how.

1. Watch the program for just a few minutes.
2. Press the PAUSE button to pause the program.

Note: The status bar at the bottom of your screen will show how long the program has been paused.

3. Press the PLAY button to watch the program from the place where you paused it.

4. Press the VIEW button to go back right away to watching the program live.

5. Press SKIP BACK to skip back ten seconds in the program.

6. Press the PAUSE button and then press the BACK button to reverse the program in slow motion. Press the BACK button once to reverse the program 1/4 the speed as normal play. Press the BACK button twice to reverse at normal speed. If you press the BACK button again, the program reverses as described in step 7.

7. Press the BACK button to reverse the program back in time.

Note: The status bar at the bottom of your screen will count up to show how far back you are going in the program.

8. Press PLAY.
9. Press the SKIP AHEAD button to jump forward 30 seconds in the program.

10. Press the PAUSE button and then press the FWD button to forward the program in slow motion. When you press the FWD button once, the program advances at 1/15 the speed of normal play. Press the FWD button twice to forward at 1/4 as fast as normal play. Press the FWD button three times to play the program. If you press the FWD button again, the program advances as described in step 11.

11. Press the FORWARD button to fast forward the program.

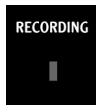
Note: The status bar at the bottom of your screen will count down, showing the amount of time remaining until you go back to live TV.

Note: If you fast forward all the way to the end of the **Delayed** bar, the receiver automatically returns to live TV.

12. Press the VIEW button to go back to the live program.

13. Press the RECORD button to start recording the program.

The **Start Recording Options** Menu will open.



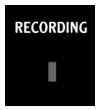
If you want to stop recording at the end of the program, select **Done**. If you want to stop the recording yourself, select **Manual user stop.** If you want to extend the recording time past the end of the event, select **Extend time after end of event**. This opens a second menu that lets you set the amount of time you want recording to continue after the event ends.

Note: Make sure the receiver's front panel **Recording** light turns on to show that you are recording a program.

Note*:* If you want, you can use the pause, play, reverse, skip back, forward, or skip ahead features at the same time as the receiver is recording the program from start to finish.

14. If you want, press the STOP button.This stops the receiver from recording the program.

Notice the receiver's front panel **Recording** light turns off to show you have stopped recording.



Tip: With DishPVR Features, you can record the same program you're watching, or watch one program while recording another. How's that for freedom of choice?

Note: If you open PIP, you can *only* use PVR functions for whatever program is in the full screen. If you want to use PVR functions with the program that is in the PIP window, you must first press Swap, to put this program in full screen.

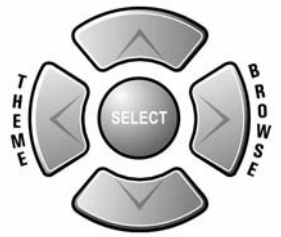
This is the end of the tour on having fun with live TV.

TOUR #4: FIND PROGRAMS AND RECORD THEM

Your new receiver not only lets you have fun with live TV, it makes recording a movie or favorite program simple.

1. To find a future program to record, press GUIDE on the remote to open the **Program Guide**.

Use the UP/DOWN/LEFT/RIGHT ARROWS to find a future program you would like to record.



Note: Programs that are on currently are displayed in green. Future programs are displayed in blue.

2. Press SELECT.

3. The **Timer** menu opens.

4. Select **Create**. You've just set up the receiver to record a program with no need for videotapes, and no confusing VCR menus to work through.

Tip: You can always watch a recorded event while recording one or two events that are on now. See page 23 for details.

5. After you have recorded a program or two, you can press PVR on the remote to open the **PVR Record Event** menu.

6. This menu lists all the programs you have recorded. Move the highlight to the program you would like to watch and press SELECT.

7. This **PVR Event** screen will open. Select **Start Over** to watch the event (program).

8. If you want to protect the program so that the receiver does not record over it without warning you first, select **Protect**. If you want to delete the program, select **Erase**. Select **Cancel** to exit this menu.

This is the end of the tour on finding programs and recording them. You will find more information on recording programs beginning on page 50.

TOUR #5: WATCH (OR RECORD) ONE PROGRAM WHILE WATCHING ANOTHER

Your DISH Network receiver has two tuners. This means you can watch two different programs at the same time using Picture in Picture (PIP). You can watch one program while recording another that's on at the same time. You can record one program while watching a previously recorded program. You can even watch a recorded program while recording two other programs!

1. Press PIP. The PIP window will open. The program in the small box will be whatever is playing on the last channel you watched in PIP.

2. Press SWAP on the remote. The channel that was in the PIP will now be full screen.
3. Press GUIDE on the remote. Use the **Program Guide** to find a program that you want to watch now. Select that program.

4. This new program will be full screen.
5. If you want to go back to watching your original program and put this new program in the PIP window, press SWAP.
6. If you want to make the PIP window larger, press the PIP button again. If you want to eliminate the PIP window, press PIP again.

To record one program while watching another.

1. Press GUIDE to open the **Program Guide**. Find a program you want to watch now.

2. Press SELECT to watch that program.

3. Press the PIP button.

4. Press the SWAP button.

5. Press GUIDE to open the **Program Guide** again.

6. Find a program you want to record that is also on now.
7. Select the program.

8. The program selected displays. Press the RECORD button. The **Start Recording Options** menu opens.

Note: If you open PIP, you can *only* record the program that is in the full screen. If you want to record the program that is in the PIP window, you must first press Swap, to put this program in full screen.

9. Select **Done** to stop recording at the end of the event.
10. Press the SWAP button. The original program is in the full screen and the recording is in the PIP window.
11. Press the PIP button twice. The recording is going on in the background.

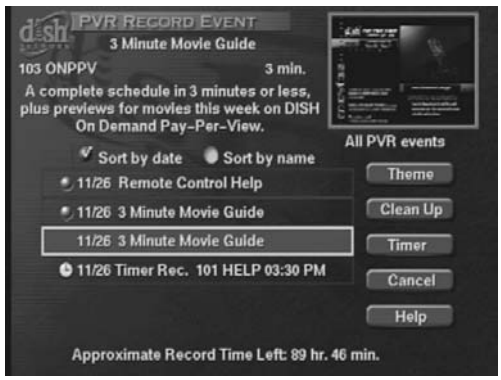
TOUR #6: RECORDING TWO PROGRAMS WHILE WATCHING A THIRD RECORDED PROGRAM

With this DishPVR Receiver, you can actually record two programs while watching a program you had recorded before. Here is an example of how you can do this.

1. If you have not yet recorded a program, do so now by pressing GUIDE to open the **Program Guide**.
2. Move the highlight in the **Program Guide** to a program that is on now. Press SELECT. When you see the new program, press RECORD. The **Start Recording Options** menu will open.

3. Select **Done**. The receiver will begin recording this program and you will go back to watching the program.
4. Wait until this program has ended. Press GUIDE to open the **Program Guide.** Find an other program you want to record that is also on now. Press RECORD. The **Start Recording Options** menu will open again.
5. Select **Done**. The receiver will begin recording this program.
6. Press the PIP button, and then the SWAP button. Your recording is shown in the PIP window.
7. Press GUIDE to open the **Program Guide** again. Find a second program you want to record that is also on now.
8. Select that program. The **Start Recording Options** menu screen will open again.
9. Select **Done**. The receiver will begin recording this program and you will go back to watching this program in the main screen.

10. Press PVR on the remote control. The **PVR Record Event** screen will open.


PVR Record Event
3 Minute Movie Guide
103 ONPPV
3 min.
A complete schedule in 3 minutes or less, plus previews for movies this week on DISH On Demand Pay-Per-View.
All PVR events
Sort by date
Sort by name
11/26 Remote Control Help
11/26 3 Minute Movie Guide
11/26 3 Minute Movie Guide
11/26 Timer Rec. 101 HELP 03:30 PM
Theme
Clean Up
Timer
Cancel
Help
Approximate Record Time Left: 89 hr. 46 min.

11. You will see the name of the program you first recorded. Select it and then select **Start Over**.

12. You can then watch this recorded program while the receiver is recording the other two events (programs).

    a. The top entry is the recording you started last. A red dot indicates that this entry is currently being recorded.

    b. The next entry is the recording that is in the PIP window. A red dot indicates that this entry is being recorded, also.

    c. The next entry is the recording you started at the beginning of Tour #6. Scroll down to this entry and select it. Now select **Start Over**.

Note: You can *only* record the program that is in the full screen. If you want to record the program that is in the PIP window, you must first press Swap, to put this program in full screen.

CONCLUSION

Now that you know how to use the basic functions, you'll want to read Chapters 3 and 4 for an in-depth discussion of advanced features of the DishPVR 721.

Chapter 3

About the System

WHAT YOU WILL FIND IN THIS CHAPTER

Using the Front Panel Controls and Connections page 25
Using the Back Panel Connections page 28
Using the Remote to Control the Receiver page 31
More About the Remote Control page 36

USING THE FRONT PANEL CONTROLS AND CONNECTIONS

FRONT PANEL CONTROLS

SMART CARD DOOR

The Smart Card should *already* be inserted behind this door when you get the receiver. Press and release the right side of the door if you need to open it. To reset the receiver, remove the Smart Card and then re-insert it.

The front panel buttons give you *some* control over the operation of the receiver. Each of these buttons works the *same* way as the same button on the remote control.

INFO BUTTON

Press the INFO button to see information about a program you are watching, a program that is selected in the **Browse Banner**, or a program you have highlighted in a menu. The information may include one or more of these symbols:

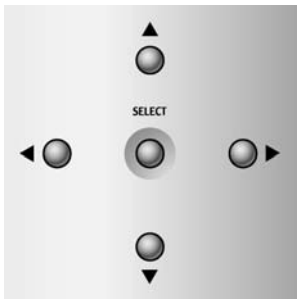
- For a program not available for purchase
- For a program with an event timer
- For a blacked-out program
- For a locked program
- For a pay per view program

MENU BUTTON

Press the MENU button to display **Main Menu** choices.

UP/DOWN/LEFT/RIGHT BUTTONS

Press the UP/DOWN/LEFT/RIGHT ARROW buttons to move the highlight to an option in a menu. You can also use these buttons to move up, down, left and right when in the **Program Guide** or **Browse Banner**.



SYSTEM INFO BUTTON

Press the SYSTEM INFO button to open the **System Information** screen. You can display this screen whether the receiver is On or Off.

SELECT BUTTON

Press the SELECT button to select the highlighted option or program in a menu.

POWER BUTTON

Press the POWER button to turn the receiver on or off. Keep in mind that the receiver takes time to start up and if you do not see a picture right away, it does not mean there is anything wrong with the receiver.

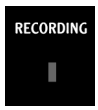
If the receiver seems to stop working, press *and hold* the POWER button for about five seconds, until the POWER light turns off, and then release the button. The TV screen goes black while the receiver re-initializes, and then the picture will eventually reappear.

POWER LIGHT

The POWER button lights up when you turn the receiver on and goes out when you turn the receiver off.

RECORDING LIGHT

The RECORDING light turns on whenever the receiver is recording a program.



ONLINE LIGHT

The ONLINE light turns on whenever the receiver is online or connected to the Internet. This feature may be available in the future.

Message Light

The MESSAGE light turns on whenever you have a new E-mail message waiting. This feature may be available in the future.

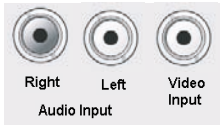
FRONT PANEL CONNECTIONS

USB PORT

The USB Port on the front panel is reserved for future use by EchoStar-approved USB devices.

PHONO (RCA) AUDIO/VIDEO INPUTS

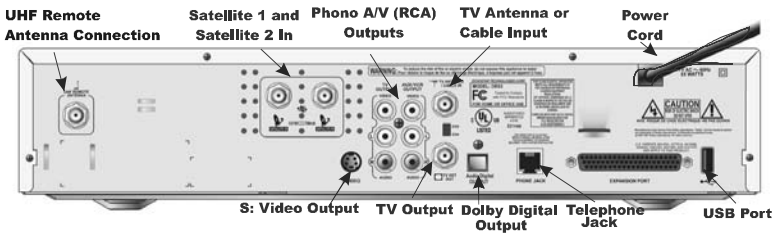
Connect a VCR or video camera and then tune the receiver to Channel 0 to use these inputs.



MIC

The Mic jack on the front panel is reserved for future use.

USING THE BACK PANEL CONNECTIONS



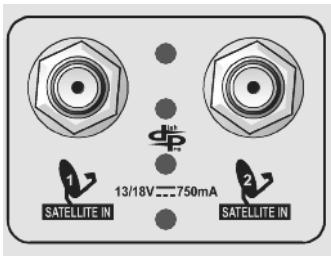
The receiver back panel has ports for wiring the receiver to other electronic devices (depending on the wiring setup, you may not need to use some of these ports). The back panel also has the power cord and telephone jack.

The receiver's fan is at the bottom of the unit. It is important that you put the receiver on a hard, flat surface so that the fan can operate as designed.

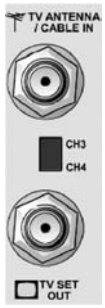
SATELLITE IN 1 AND SATELLITE IN 2

Connect the coaxial cables from the satellite dish to the **Satellite In 1** and the **Satellite In 2** inputs.

Note: Both coaxial cables *must* be connected to the same LNBF unit or switch for the DishPVR 721 receiver to work properly.



TV ANTENNA/CABLE IN AND TV SET OUT



These ports provide good picture quality and good non-stereo sound quality (even if you have a TV or other devices that support stereo sound).

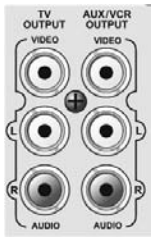
If you use these ports, you *must* keep the TV tuned to either Channel 3 or 4 to watch satellite channels. You also need to set the back panel **CH3/CH4** switch to match the channel tuned to on the TV.

Note: If you are connecting more than one TV to the receiver, all TVs can be set to the same Channel 3 or Channel 4 as the receiver.

If you connect a cable TV box or a broadcast TV antenna to the receiver, use the **TV Antenna**/**Cable In** port for the local signal input. You can then use the TV/VIDEO button on the remote to switch your signal from the satellite receiver to local broadcasts or cable and back again.

PHONO (RCA) AUDIO/VIDEO OUTPUTS

These outputs provide better picture quality and stereo sound.



- If the TV has only one input for this type of audio, connect it to the white audio output under **TV Output**.
- If you want to connect a VCR to this receiver, use the (RCA) **Audio Output** labeled **AUX/VCR Output**.
- If you use these outputs to connect the receiver to other devices such an amplifier, you *must* use the menus displayed by each device to change the input from local broadcast TV to satellite TV. See the devices' user manuals for more information.

SUPER VIDEO (S-VIDEO) OUTPUT

This output provides the highest quality video available. If you use this output for video, you *must* still connect the audio using the Phono (RCA) **Audio Outputs** or the **Dolby® Digital Output**.

DIGITAL AUDIO OUTPUT

The receiver includes an optical digital audio output that will provide a Dolby® Digital or linear PCM bitstream. To use this output you must connect it to a stereo system or audio decoder/amplifier that can process such output.

UHF Remote Antenna Input

This satellite receiver uses the antenna to receive UHF signals from the remote to control it from another room. Connect the UHF antenna here, and place it so it does not touch anything.

Note: To use UHF signals to control the receiver, you *must* attach the UHF antenna to the receiver back panel UHF Remote Antenna connection.

Note: If you don't attach the UHF antenna, you can still use the infrared (IR) capabilities of the remote to control the receiver over short distances.

Phone Jack (Telephone Jack)

Connect a telephone cable with a standard RJ-11 telephone connector to the receiver here, and then connect the cable to an active telephone line.

Note: You must connect the phone jack if you want to watch PPV programming or use the Caller ID function of the receiver.

Expansion Port

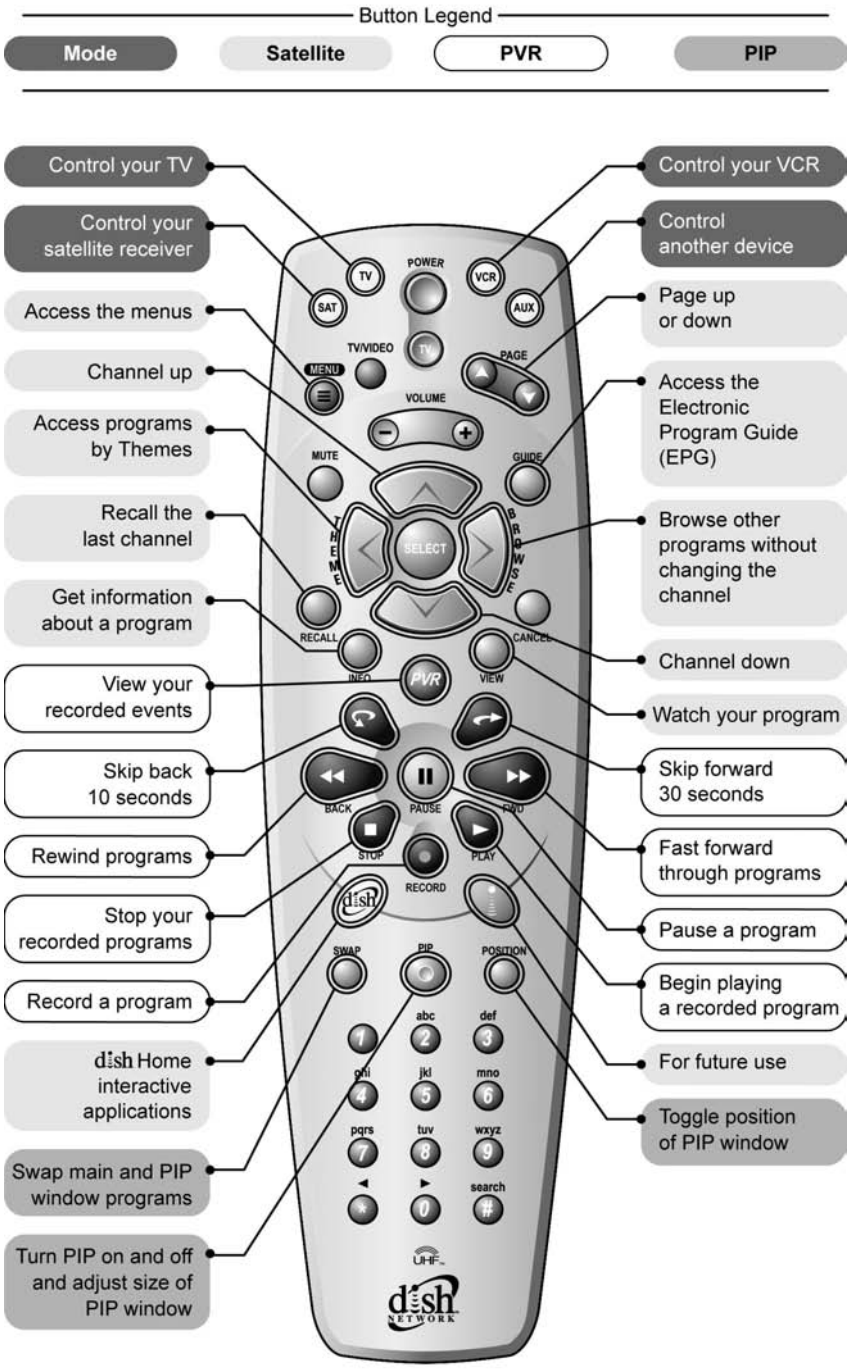
This port is for future use.

USB Port

There is a **USB Port** on the back panel. It is reserved for future use by EchoStar-approved USB devices.

USING THE REMOTE TO CONTROL THE RECEIVER

This describes the remote control features as they apply to the receiver. For complete details on using the remote to control other devices, turn to page 84.



SAT MODE BUTTON

Press this button to set the remote to SAT ("satellite") mode. The SAT mode button's back light lights up for two seconds to show you've set the remote to SAT mode. While the remote control is in SAT mode, the remote control buttons operate as described below to control satellite receiver functions.

TV/VIDEO BUTTON

If you connect a second video source, such as cable or a broadcast antenna, to the receiver's back panel **TV Antenna/ Cable In** port, you can use this button to switch the receiver between the satellite signal and the another video signal.

POWER BUTTONS

Press the blank POWER button to turn the receiver on or off. The green POWER light on the receiver front panel lights up to show the receiver is on, and turns off to show it's off.

Note: To use the TV POWER button, you must set up the remote to control the TV. See *Set Up the Remote to Control Other Devices* for instructions.

MENU BUTTON

Press the MENU button to display the **Main Menu** choices.

PAGE UP AND PAGE DOWN BUTTONS

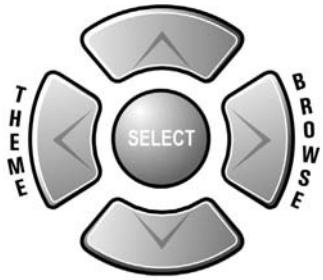
Press the PAGE UP button or the PAGE DOWN button to scan, page by page, through the **Program Guide**, a **Themes** list, a **Favorites List**, an **Event Timers** list, or a list of channels.

GUIDE BUTTON

Press this button to open the **Program Guide**. When the **Program Guide** is open, press this button repeatedly to switch among **Favorites Lists**.

UP/DOWN/LEFT/RIGHT BUTTONS

- Change channels - Press the UP or DOWN ARROW button to change channels.
- Open the **Browse Banner** - Press the RIGHT ARROW button.
- Show **Themes** - Press the LEFT ARROW button.
- Move around within the **Program Guide**, menus, and **Browse Banner** - Press the UP, DOWN, LEFT, and RIGHT ARROW buttons.



SELECT BUTTON

Press the SELECT button to select a highlighted option or program in a menu.

RECALL BUTTON

Press the RECALL button to return to the last channel you were watching.

Note: Both main and PIP windows maintain their own recall channel lists.

INFO (INFORMATION) BUTTON

Program Information - Press the INFO button for more information when you watch a program, or when you have the **Program Guide**, **Browse Banner**, or **Themes** list open.

Help - Press the INFO button to see help information when a **Help** button appears in a menu.

VIEW BUTTON

When you watch a program, press the VIEW button to briefly display the **View Banner**.

When you use a menu, press this button to cancel a procedure and return to watching a live program.

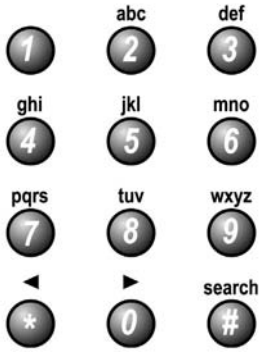
When you have paused a program, press this button to go to live.

CANCEL BUTTON

Press the CANCEL button to cancel a procedure and return to the previous menu or to go back to watching your program.

NUMBER BUTTONS

Change the channel - Use the NUMBER buttons to enter a channel number to change the channel. If you have the **Program Guide** open, use the NUMBER buttons to jump to the channel listing on the **Program Guide**.



Scroll through the **Program Guide** by time - When you have the **Program Guide** open, enter a number of hours using these buttons, and then press the RIGHT or LEFT ARROW button to skip the **Program Guide** forward or backward that many hours.

Enter menu options - For an option with a NUMBER, you can press the NUMBER for that option instead of highlighting and selecting the option.

Enter numbers in a blank - Highlight the place where you need to enter the NUMBER. Press a NUMBER button(s) (or, you can use the UP/DOWN ARROW buttons to enter the number).

Search - Use the letters above the NUMBER buttons while in the **Search** menu (see page 60).

DISHPVR BUTTONS

You can use the DISHPVR buttons to record or play back a program, pause or skip forward, skip back, stop, go forward or back and record. If you push the PVR button, the **PVR Record Event** screen opens (see page 65 for more information on PVR features).

DISH BUTTON

Press the DISH button to go to **Dish Home**.

i BUTTON

This button is reserved for future use.

PIP BUTTON

Use the PIP button open the PIP window. To make the PIP window larger, press this button again. Press it a third time, and the PIP window will close.

SWAP BUTTON

Press the SWAP button to switch between the video in the main display with the video in the PIP window.

Note: Remember that you can only access the **Program Guide**, **Browse Banner** and PVR functions for the picture that is in full screen mode. If you want to use the **Program Guide**, **Browse Banner**, etc. for the video in the PIP window, you must first press SWAP to make it full screen.

POSITION BUTTON

Use the POSITION button to move the PIP to different positions on the screen.

STAR (*) BUTTON

Press this button to back space while using the search function of your receiver.

POUND (#) BUTTON

Press this button to display the **Search** screen. Also, you use this button in several procedures in this *User Guide.*

MORE ABOUT THE REMOTE CONTROL

REMOTE CONTROL BATTERIES

The batteries for your remote control are in the cable pack that was shipped with your receiver. To install the batteries:

1. Press down on the battery cover's top latch and lift the cover off.
2. Put the new batteries in. Make sure you match the plus ("+") ends with the plus markings on the battery case.
3. Fit the battery cover's bottom tab back into the slot at the bottom of the battery case, and snap the cover back into place.
4. When you replace old batteries, you should replace *all* of the batteries. Use batteries of the same kind, *for example* alkaline or carbon zinc, and *don't* mix batteries of different kinds. Alkaline batteries last longer.

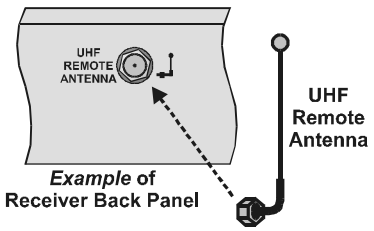
REMOTE CONTROL SIGNALS: UHF AND IR

The remote control uses *both* UHF radio signals and IR light signals to control the receiver but uses *only* IR signals to control other devices.

- IR signals travel only short distances (40 feet or less), and *can't* go through walls or other solid objects. You *must* point the remote control directly at the device you want to control, with *no* objects to block the signal path.
- UHF signals travel long distances (100 feet or more) and *can* go through walls and other solid objects. Because UHF signals travel so far, the receiver may respond to signals from other nearby remote controls. To handle this problem, please see *Change the Remote Control Address* on page 37. If this doesn't work, please see *Install an Attenuator* on page 39.

ATTACH THE REMOTE CONTROL ANTENNA

To use UHF signals to control the receiver, you *must* attach the UHF antenna to the receiver back panel UHF Remote Antenna input. Place the antenna straight up to be able to use the remote as far away as possible.



Note: Set the antenna *straight up* so you can use the remote control from as far away as possible. *Don't* let the antenna touch anything.

Note: If you don't attach the UHF antenna, you can *still* use the remote to control the receiver at *short* distances, as the remote also sends an IR signal to the receiver.

CHANGE THE REMOTE CONTROL ADDRESS

Because UHF signals travel long distances and go through walls, a neighbor's remote may control your receiver by mistake. To keep this from happening, you can change the remote address.

1. Open the **System Information** menu by pressing the SYSTEM INFO button on the receiver's front panel.

Note: Use the front panel receiver System Info button because if your *neighbor's* remote can control *your* receiver, chances are *your* remote can control your *neighbor's* receiver.

Current Remote Address:

_____

2. Write down the **Remote Address** you see on the menu.

   (The address is **1** in this *example*).

   Keep the menu open while you do steps 2 through 8.

3. *Press and hold* the remote control SAT mode button for about four seconds, until all the mode button backlights come on, and then let go of the SAT mode button.

4. Use the number buttons to enter any number from 1 to 16, *except* the one you found in step 1.

5. The SAT mode button backlight turns off after you enter each digit, and then turns on again.

6. Press the POUND (#) button. If the address you entered is valid, the SAT mode button backlight flashes three times.

New Remote Address:

_____

7. Press the RECORD button.

8. Write down the new remote control address.

   This is important: Make sure the **Remote Address** on the **System Information** screen now matches the one you entered in step 8. If the remote control and the receiver have different addresses, the remote *cannot* control the receiver!

9. To check the address programmed on the remote control, press and hold the SAT mode button until all the mode button backlights come on. Then let go of the SAT mode button, and press the POUND (#) button *twice*. The SAT mode button backlight flashes the same number of times as the address.

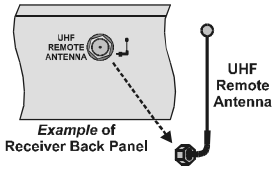
10. Press the SELECT button to clear the **System Information** screen from the TV screen.

INSTALL AN ATTENUATOR

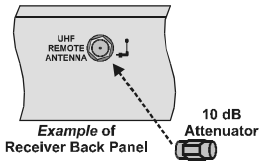
Unwanted UHF signals may interfere signals from the remote control to the receiver. To prevent such interference, you can install a 10 dB attenuator (available from many consumer electronics parts stores).

Note: This will help keep out stray UHF signals, but also cut down how far away you can use the remote control.

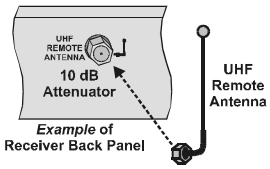
1. Remove the UHF antenna from the UHF Remote Antenna input on the receiver back panel.



2. Attach a 10 dB attenuator to the UHF Remote Antenna input.



3. Attach the UHF antenna to the attenuator.



Notes

Chapter 4

Using the Receiver

WHAT YOU WILL FIND IN THIS CHAPTER

Navigating Around the Menus	page 42
Using the Program Guide	page 43
Using the View Banner	page 46
Using the Browse Banner	page 46
Buy a Pay Per View Program	page 49
Using Timers	page 50
Finding Programs with Themes	page 59
Finding Programs Quickly Using the Search Feature	page 60
Using Favorites List	page 62
Using the PVR Features	page 65
Using Locks	page 66
Using Caller ID	page 77
How to Change Languages	page 79
How to Set Up the Receiver to Control a VCR	page 80
How to Use Dolby® Digital Sound	page 81
Using the Remote to Control Other Devices	page 83

NAVIGATING AROUND THE MENUS

HOW TO MAKE A CHOICE IN A MENU

In some cases there are two ways to make a choice in a menu list.

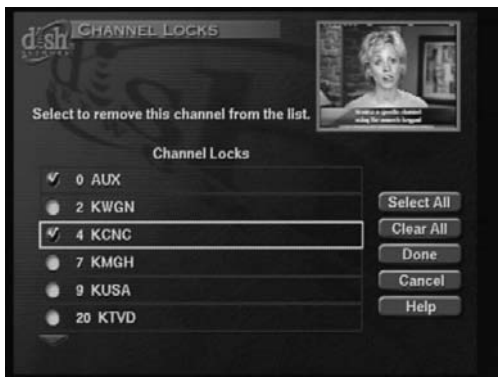
- **Either**: Move the highlight to the menu option you wish to choose and press SELECT on the remote.
  Or: If the option has a number, you can press the matching NUMBER button(s) on the remote or optional keyboard to select that option.

HOW TO MAKE A CHOICE IN A MENU LIST

Your DishPVR Receiver has two kinds of lists.

- A single choice list allows you to make only one choice in a list. If you make another choice, you do not keep the earlier choice.
- For example, in the menu shown at right, the **TV Listing** option is highlighted. If you were to move the highlight to the **Preferences** option, **TV Listing** would no longer be highlighted.

- A multiple choice list allows you to make more than one choice at a time. If you make another choice, you keep all your earlier choices. For example, if you were to select **101 Help** in the list of channels shown at the right, and then **105 USA,** there will still be a check mark in **101 Help** showing that it is still selected.



HOW TO CANCEL A PROCEDURE

To cancel any procedure, press the remote control CANCEL or VIEW button before you do the last step of the procedure. To return to watching a program, press VIEW on the remote control.

USING THE PROGRAM GUIDE

You can use the **Program Guide** to see what programs are on and to change channels. To access this guide, press GUIDE on the remote.

- A *red* background behind a channel usually means you have not subscribed to the channel. After you subscribe to a channel, you can tune to it. To subscribe to a channel, please call 1-800-333-DISH (3474).

- The **Program Guide** shows which Favorites List is active. If **AllChan** is active, the **Program Guide** shows *all* the channels. The **AllSub** Favorites List shows only the channels in your subscription. If you activate another list, the **Program Guide** shows *only* the channels on that list.

  Note: Programs that are currently showing are displayed in green. Future programs are displayed in blue.

- The **(DD)** sign shows a program has Dolby® Digital sound.

- The **Program Guide** shows programs on now and coming on for the next seven days. The guide does *not* show programs that have ended.

  Note: You must be able to view the 110°W orbital location, for the **Program Guide** to display information on programs for the next nine days.

SET THE CHANNEL ORDER IN THE PROGRAM GUIDE

You can set up the **Program Guide** to list channels in *descending* order, with the highest channel number at the top, or in *ascending* order, with the highest channel number at the bottom.

Note: If you do not set a channel order, the **Program Guide** lists the channels in *descending* order.

1. Press the MENU button.

2. Select the **Preferences** option and then **View Preference**, or press 4-2.

3. Under **Guide Order**, select the **Ascending** or **Descending** option.

4. Select **Done** to accept the changes and exit this menu. If you do not want to accept the changes, press CANCEL or VIEW on the remote control.

SELECT A PROGRAM IN THE PROGRAM GUIDE

1. Press GUIDE to open the **Program Guide**.

2. Enter the channel number you want. The **Program Guide** shows the channel you entered and some others.

3. The **Program Guide** has events listed for as many as nine days. If you want to skip forward or backward in time some number of hours:

   a) Enter the number of hours you want to skip. The **Program Guide** shows this number of hours.

   b) Press the RIGHT ARROW button to move forward. You can also use the NUMBER buttons on the remote to enter the number of hours you want to move backward, and then press the LEFT ARROW button.

   Note: The **Program Guide** does *not* show programs that have ended.

   c) You can also skip the **Program Guide** ahead one day (24 hours) at a time. To do this, press the SKIP AHEAD button. To continue moving forward more days, keep pressing the SKIP AHEAD button.

   d) Use the SKIP BACK button to go back 24 hours.

4. Move the highlight to the program you want. You can press the INFO button for more information about the program you highlighted. Press the CANCEL button or select **Done** to go back to the **Program Guide**.

   Note: If you select a future event, you are creating a timer for that event (see page 50).

5. Press the SELECT button to change to the new channel.

USING THE VIEW BANNER

You can use the **View Banner** to find out more about a program you are watching, *while you watch it*. The receiver displays the **View Banner** for a few seconds at the top of the TV screen every time you change the channel or press the VIEW button.

USING THE BROWSE BANNER

Use the **Browse Banner** to see what other programs are on and *not* miss any of a program you are watching. When the **Browse Banner** is open, you will see the **View Banner** on the current program at the top of the screen and on the left side of the **Browse Banner** at the bottom of the screen. At the bottom right of the screen is information on the program that is on next on the same channel. Press the UP or DOWN ARROW and the bottom left of the **Browse Banner** will change to show information on programs *that are on at the same time* on channels above or below the one you're watching. The bottom right of the **Browse Banner** will show information on programs that are next on the channels above or below the one you are watching.

If you use the **All Chan Favorites List** (the name of the list is displayed at the bottom of the **Browse Banner**), the **Browse Banner** shows *all* channels. If you activate a **Favorites List** you created (see page 62 to use **Favorites Lists**), the banner shows *only* the channels you put on that list. If you hide adult channels and lock the receiver, the banner does *not* show any of these channels.

OPEN THE BROWSE BANNER

While you watch a program, press the BROWSE (RIGHT ARROW) button.

SELECT A PROGRAM WITH THE BROWSE BANNER

- If you use the **Browse Banner** to find a program you want to watch, and the program is on now, press the SELECT button to tune to the program.
- If the program comes on sometime in the future, and you press the SELECT button, this opens a menu where you can set a timer for the program.

CLOSE THE BROWSE BANNER

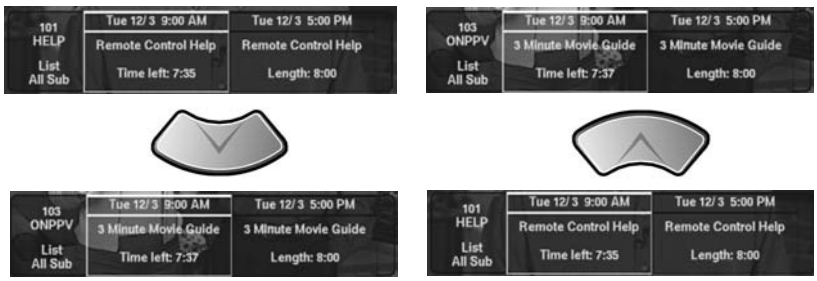
Press the CANCEL button.

CHANGE THE CHANNEL ORDER

1. Press MENU 4-2 to open the **View Preferences** menu.

2. Scroll to select **View Order** and select either **Ascending** or **Descending**.

   Ascending order will show the next higher channel when you press the DOWN ARROW and the next lower channel when you press the UP ARROW with the **Browse Banner** open.



   Descending order will show the next lower channel when you press the DOWN ARROW and the next higher channel when you press the UP ARROW with the **Browse Banner** open.

BUY A PAY PER VIEW PROGRAM

ATTENTION!

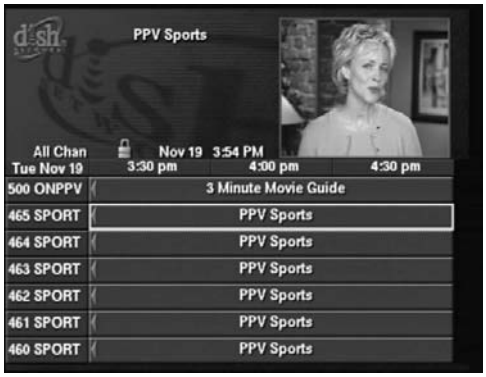
After you confirm the purchase of a Pay Per View program, you cannot cancel and we will bill you for it.

You must pay for all programs you or anyone else buys with the receiver. To password protect the purchases of Pay Per View programs, see *Lock or Unlock Pay Per View Programs* on page 68.

To buy Pay Per View programs, you must connect the receiver to an active phone line.

Watch a Pay Per View program on as many as six TVs connected to six receivers. Order the program for each receiver but you pay for the program only once.

1. Select a Pay Per View program in the **Program Guide**.



2. **Either**: To buy the Pay Per View program, select the **Yes** option. The receiver displays a menu where you must confirm the purchase. Go on to step 3.

   Or: If you do not want to buy the Pay Per View program, select the **No** or **Cancel** option. If you cancel the order, you can stop here.

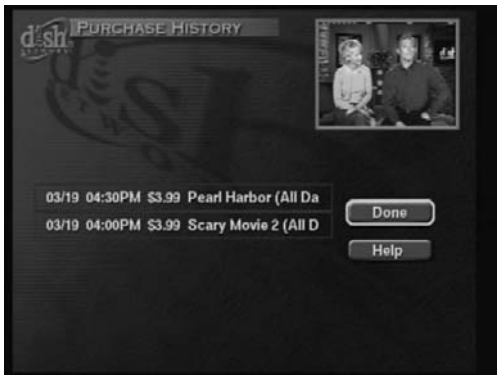
3. **Either**: Select the **Yes** option to confirm the purchase. We'll bill you for it.

   Or: Select the **No** or **Cancel** option to cancel the purchase.

REVIEW PAY PER VIEW PURCHASES

1. Press the MENU button.
2. Select **TV Listing** then **Purchase History** or press MENU 1-5 on the remote.

3. This opens a list of events you've purchased, including those you have watched and those you purchased but have not yet watched.



4. Select the **Done** option to exit the list.

USING TIMERS

Timers allow you to set timers to record programs, or to remind you that a program (event) is about to start.

- An "event" is a program, sports event, Pay Per View movie, or any single program available via DISH Network.
- Depending on the wiring setup, if you open a menu while recording to a VCR, the menu may be recorded. If you change the volume or press the MUTE button, the volume change may be recorded.
- If a program time changes by more than 24 hours, an automatic timer will not record the program.
- Because your PVR receiver has two tuners, you can set two different timers for the same time. For example, you could record a half-hour sitcom on one channel from 8:00 to 8:30 PM, while recording a movie on another channel that is on from 8:00 to 10:00 PM.

TIMER TYPES

PVR Reminds you a program is about to start; tunes the receiver to the program when it begins; starts recording the program onto the internal hard disk drive.

Auto-Tune Reminds you a program is about to start; tunes the receiver to the program when it begins.

Reminder Reminds you a program is about to start.

VCR Reminds you a program is about to start; tunes the receiver to the program when it begins and starts a VCR to record the program. However, you must remember to turn the VCR on and insert a videotape in it.

Note: You cannot record a program to a VCR until you set up the receiver to record to a VCR. For information on doing this, see page 80.

TIMER FREQUENCIES

Once Applies to a one-time program. The receiver deletes this timer right after the timer has completed.

Weekly Works once a week on the same channel at the same time on the same day. You can apply this timer to a repeated program.

Daily Works on Monday through Sunday on the same channel at the same time each day. You can apply this timer to a repeated program.

Mon.-Fri. Works on Monday through Friday on the same channel at the same time each day. You can apply this timer to a repeated program.

When a Timer Works

Only for three minutes right before an event timer works, the receiver displays a small blinking "clock" symbol on the TV screen. This symbol disappears when the program begins. While the symbol is displayed, you may do one of the following:

Either: Press the remote control CANCEL button to clear the symbol from the TV screen. This does *not* affect the timer; it *will* work.

Or: Press the remote control INFO button to see more information on the event timer. If you do this, you have the following choices:

- Select the **OK** option to continue with the event timer.
- Select the **Stop Timer** option to stop the event timer.

Note: Pressing INFO about a timer event only works one time. Subsequently pressing the INFO button results in the current program's information being displayed in the normal way.

How to Use Quick Record

Quick Record lets you record a program you are watching now in the main video window.

1. While you are watching a program you want to record, press RECORD.

   Note: You can record starting at any point of the program that is contained within the pause buffer. Use the PVR keys to go to the starting point of your recording, and then press RECORD to record from that point forward.

2. The **Start Recording Options** menu will open.

3. If you want the recording to **Stop at End of Event**, select **Done** and the receiver will automatically record your program.

   Note: If you want to set the stop time yourself, select **Manual user stop.** You will have to stop the recording yourself by pressing the STOP button on the remote control. If you would like to extend the recording time after the end of the event, select **Extend time after end of event**, and then **Done**. This opens another menu where you can set the exact number of hours and minutes you want recording to continue after the scheduled end of the event.

EVENT TIMERS

You can also create a timer for a future event. When you create a timer, you have more choices in terms of how the event is recorded and whether or not it is protected. To do this:

1. Find the program you want to record using the **Program Guide** or **Browse Banner**.
2. Highlight the event.
3. Press SELECT.
4. This **Timer** menu will open.

The default procedure is to record the event in your PVR list on your internal hard drive. Optionally, you may do the following:

- Select **Auto-Tune** if you want the receiver to tune to the program shortly before it starts but not record it.
- Select **Remind** if you want to be reminded the event is about to start, but don't want to record it or have the receiver automatically tune to it.
- Select **VCR** to record the program to a VCR.

Note: You cannot record a program to a VCR until you set up the receiver to record to a VCR. For information on doing this, see page 80.

5. Next, you can select a **Timer Frequency** option. You will see a check mark next to **Once**. If you want to record the program more than once, select another option.

6. If you want to start the recording one minute early, select the **Start one min. early** check box to start the timer one minute before the scheduled program start time.

7. If you would like to extend the recording time *past* the end of the program, move the highlight to the box to the right of **End**. Then use the Number buttons on the remote to enter another number of minutes such as 2, 4, 30, etc.

8. You can protect this program from being automatically deleted. To do this, select the **Protect Recording** option.

9. After you have made all your choices, select the **Create** option to save the event timer. The receiver displays a timer symbol in the **Program Guide**, and also when you press the Info button to get information about the program.

Note: If you recorded it as a PVR event, then it will also show up on the PVR list after it is recorded.

To Set A Second Event Timer for the Same Time

If you would like to set another timer for the same time as the timer you just set, do this:

1. Press GUIDE on the remote to open the **Program Guide**.
2. Find a program that is on at the same time.
3. Highlight the program and press SELECT.The **Start Recording Options** menu will open.
4. Select the option you want, and then select **Done.**

MANUAL TIMERS

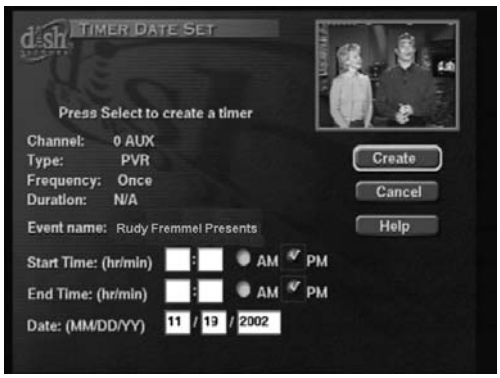
If you want to set an manual event timer, or if you want to edit an existing timer, perform this procedure:

1. Press MENU. Move the highlight to the **Timers** option. Press SELECT.

2. This **Timer Management** menu will open. Select **Create**.

3. The **Manual Timer Create** screen displays. Set the **Type**, **Frequency**, and **Channel** for the timer you are creating. Scroll to **Set Time**. Press SELECT.

4. The **Timer Date Set** screen displays. Scroll to the **Start Time** field. Use the number pad on your remote control to set the time.



5. Scroll to the **End Time** field. Use the number pad on your remote control to set the time.
6. Scroll to **AM** or **PM** and press Select. When you are finished setting the time, scroll to **Create** and press SELECT.
7. Scroll to the **Done** button and press SELECT. You created a timer.

WHEN TIMERS OVERLAP

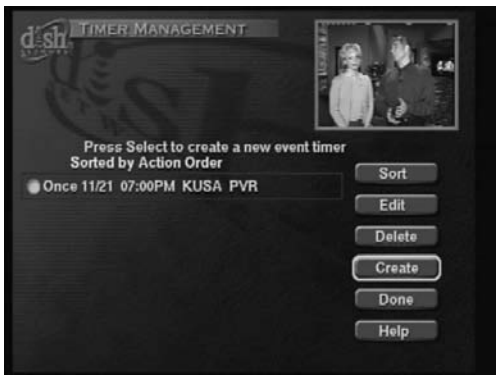
If you try to create more than two Timers for programs that overlap, the receiver displays a **Timer Conflict** screen with the dates and times of the programs that have already been set. The top entry is the new timer that you are attempting to create. The bottom entry is the current timer for the time slot. The receiver also displays this menu if a program time has changed, causing one timer to overlap another. You must edit or delete one of the timers.

1. Use the UP or DOWN ARROWS to select **Delete** for the program you no longer want a timer set.
2. The **Program Guide** screen displays.

HOW TO EDIT OR DELETE A TIMER

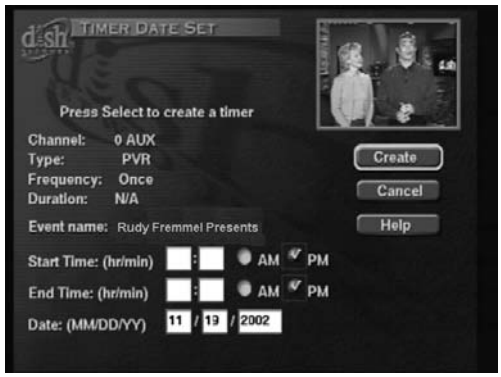
You can edit almost any feature of an event timer. To do this:

1. Press MENU and then move the highlight to the **Timer** option. Press SELECT.
2. This opens this **Timer Management** menu.



3. Press the LEFT ARROW, select the timer you want to edit, and then press the RIGHT ARROW.
4. If you want to delete the event, move the highlight to **Delete**. Press SELECT. The event will be deleted from your list of PVR events.
5. If you want to change the timer, move the highlight to **Edit**. Press SELECT. The **Timer** menu will open. You can now change the **Timer Type**, **Timer Frequency**, and **Channel**. To do this, move the highlight to the option you want to change and press SELECT.
6. If you want to make sure the receiver does not write over this program without notifying you first, select the **Protect Recording** check box.

7. If you want to change the **Start** or **End** time, move the highlight to **Set Time** and press SELECT.You will see this menu. To change the **Start Time**, move the highlight to the box next to hour. Use the NUMBER buttons to enter a new hour**.**

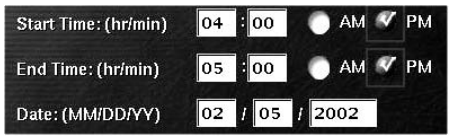


8. Move the highlight to the minute box and use the NUMBER buttons on the remote to enter new minute numbers.

9. If you want to change the **End Time**, move the highlight to the hour box under **End Time**, and use the NUMBER buttons to add a new number of hours.

10. To change the minutes under **End Time**, move the highlight to the minute box and use the NUMBER buttons on the remote to enter new numbers.

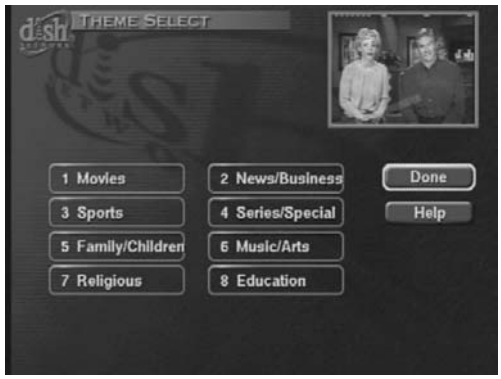
11. If you want to change the **Date**, move the highlight to the first (**Month)** box and use the NUMBER buttons on the remote to enter a new month. If you do not need to change the month, skip this box and move the highlight directly to the **Day** box, and use the number buttons to enter a new day.



12. When you have made all the changes you want to make, select **Create**.

FINDING PROGRAMS WITH THEMES

1. While you watch a program, press the THEME (LEFT ARROW) button to open the **Theme Select** menu.



2. Select the option for a theme. This opens a list of programs like this example.

Note: If you hide adult channels and lock the receiver, **Themes** lists do not show any adult programs on these channels.

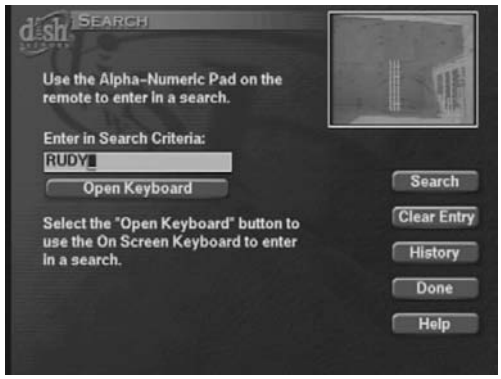
3. To search faster, press either PAGE UP or PAGE DOWN.

4. Move the highlight to a program. You can press the INFO button for more information about the program you highlight. If you do, select **Done** to go back to the list of programs.

5. Press the SELECT button to watch the program.

FINDING PROGRAMS USING THE SEARCH FEATURE

1. Press MENU and select **TV Listing** and then **Search**, or press MENU-1-2 on the remote. The **Search** screen will open.



2. Move the highlight to the **Enter in Search Criteria** field.
3. **Either**: Use the remote control number pad to enter the letters in the **Enter in Search Criteria** field. NUMBERS 2 through 9 have telephone-style numbers written above them. To enter an H, for example, press 4 twice because H is the second letter listed above the 4 on the number pad. For example, if you are searching for *Rudy Fremmel Presents*:

Press pqrs 7 three times for an R.

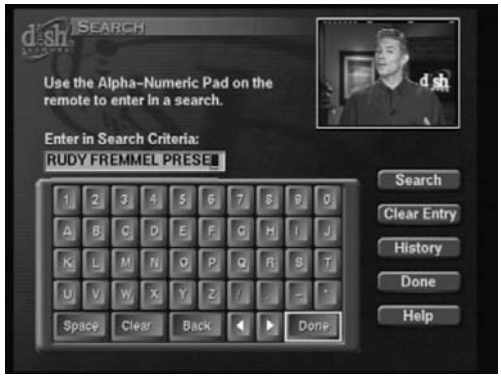
Press tuv 8 twice for a U.

Press def 3 once for a D.

Press wxyz 9 three times for a Y.

Note: You may enter up to 31 characters (letters and spaces) for your search.

Or: Move the highlight to the **Open Keyboard** button and press SELECT. A virtual keyboard will open up at the top of the screen.



Use this keyboard or the optional IR keyboard (available separately) to enter the name of the program you want to find. When you have entered the complete name, select **Done.**

Note: You may enter up to 31 characters (letters and spaces) for your search.

4. Select the **Search** option. When the search completes, you will see a screen listing the name of the programs found that match your search, and their start and stop times.

   Note: If you want to look for repeats of the same program you are currently watching, press the POUND (#) key on the remote control. The **Search** menu will display the program title in the **Search** field.

5. Move the highlight to the program you want to SELECT.

6. Press SELECT. If the program is currently playing, that program becomes the currently showing video. If the program is a future event, the **Event Timer Create** menu will open.

7. If you are satisfied with all the options, press SELECT to **Create** the recording.

8. Select **Cancel** to exit this menu.

USING FAVORITES LISTS

You can set up lists of your favorite channels, and add or remove channels any way you want.

Note: If you hide adult channels and lock the receiver, *no* lists will show any adult channels. See page 66 for information on using locks.

ABOUT FAVORITES LISTS

- When you apply a **Favorites List**, the **Program Guide** shows *only* the channels in that list. To choose channels in the list, press the remote control UP or DOWN ARROW button.
- To choose a channel whether or not it is on the **Favorites List**, use the NUMBER buttons to enter the channel number.
- **All Chan** includes all the channels. You cannot make any changes to this list.
- The **All Sub** list includes all the channels you buy. You cannot make any changes to the **All Sub** list unless you change what you buy. To do so, please call 1-800-333-DISH (3474).
- You can create a number of **Favorites Lists**. You can give each list a name. When you first get the receiver, the lists have the names **List 1**, **List 2**, etc. The lists are empty until you add channels to them.
- You can add as many channels as you want to each list.

You must do two things to use Favorites Lists:

1. Set up the list(s) you want. See *Set Up or Change a Favorites List*, below.
2. Apply a list. Please see *Apply a Favorites List* on page 64.

TO SET UP OR CHANGE A FAVORITES LIST

1. Press the MENU button.

2. Select **Preferences** and then **Favorites** or press MENU-4-1 on the remote.

3. The **Favorites** menu will open.

4. To create a new **Favorites List**, move the highlight to **List 1** (or **List 2**, **List 3**, or **List 4**) and press SELECT. Press SELECT again to **Modify List 1.** This menu will open.

5. Move the highlight to a channel you want on your **Favorites List** and press SELECT. A check mark will appear next to the channel. If you want to add more channels, move the highlight to the next channel you want on the list and press SELECT.

6. Continue selecting channels for your list. When you have selected all the channels you want on your **Favorites** list, select **Done**.

Note: You can select the **Clear All** option to remove all the channels from the list you just created. Or, you can move the highlight to a channel you would like to delete from the list and press SELECT. The check mark next to the channel will disappear.

NAME A FAVORITES LIST

You can name a **Favorites List**.

1. Press MENU on the remote and select **Preferences** and then **Favorites** or press MENU-4-1 on the remote.
2. Move the highlight into the box labeled **List 1** and press SELECT. Next, select **Edit Name**.
3. Use the on-screen keypad or optional keyboard to delete this name by selecting **Delete** until **List 1** disappears. Then type in a new name for the list using the on-screen keypad or optional keyboard.

   Note: A **Favorites List** name must be at least one letter and can be as many as ten.
4. When you finish entering the new name, select **Done**. You will see that there is now a new list under Favorites with the name you just entered.

APPLY A FAVORITES LIST

To apply a Favorites List**,** you can do *either* of two things:

Either: If the **Program Guide** is open, press the GUIDE button to apply the next list.

The **Program Guide** shows the name of the list that is active.

Or: Keep pressing the GUIDE button to switch among the lists.

Note: Unless you create at least one **Favorites List**, pressing the Guide button switches between the **AllChan** list and the **AllSub** list.

Note: You can cycle through all your **Favorites lists** by repeatedly pressing the remote control GUIDE button while in the **Guide.**

USING THE PVR FEATURES

PVR features are great because they put you in charge of TV. You can pause live TV, skip back, record the program you're watching and much, much more.

Press PAUSE to pause the program you're watching whether it's live TV or a program you recorded.

If you paused live TV, just press the PAUSE button again (pressing the PLAY button has the same effect) to go back to viewing your program where you left off — and not miss a minute of your program (up to two hours). When you're in pause mode, you'll see a bar at the bottom of the screen showing how long the program was paused.

Press STOP to stop recording or to stop playback of a recorded program.

Press the FWD button to advance quickly through the program. Press the PAUSE button and then press the FWD button to forward the program in slow motion. When you press the FWD button once the program advances at 1/15 the speed of normal play. Press the FWD button twice to forward at 1/4 as fast as normal play. Press the FWD button three times to play the program.

Tip: In Forward and Rewind, pressing the button again increases the speed of the action. There are four speeds: X4, X15, X60, X300.

Press RECORD to record the program you're watching. Just remember, you'll start recording from where you are in the program and not at the beginning. If you've been watching the entire program and want to record it from the beginning, just press the BACK button.

You can go backwards toward the start of your program by pressing the BACK button. Press the PAUSE button and then press the BACK button to reverse the program in slow motion. Press the BACK button once to reverse the program 1/4 the speed as normal play. Press the BACK button twice to reverse at normal speed.

SKIP AHEAD lets you skip forward about 30 seconds in a recorded program each time you press the button. Press the PAUSE button and then press SKIP AHEAD to advance the recording one frame at time.

SKIP BACK takes you back about 10 seconds each time you press the button. Press the PAUSE button and then press the SKIP BACK button to reverse the recording one frame at a time.

USING LOCKS

The Lock feature is for you to lock your DishPVR 721 to prevent others from purchasing PPV events or watching inappropriate programs.

GET A PERSONAL IDENTIFICATION NUMBER

You can set up a Personal Identification Number (PIN) for call-in requests *only.* When you call the Customer Service Center, you *must* provide this PIN to make any changes to your account, to buy services, or to get information. You can call the Customer Service Center at 1-800-333-DISH (3474) at any time to set up a PIN.

If you forget your PIN, you *must* call the Customer Service Center. We may ask for more information to make sure it's okay for you to get this information.

YOU CAN SET LOCKS *AND* LOCK THE RECEIVER SO *ONLY* SOMEONE WHO KNOWS THE PASSWORD CAN GET TO LOCKED CHANNELS OR PROGRAMS.

ATTENTION!

You must do two things to use locks:

1. **Set the locks** you want (see the next few pages).
2. **Lock the receiver.** This is how you apply the locks you set (that is, you make them work). See *Lock or Unlock the Receiver* on page 76.

CREATE A PASSWORD

You cannot set a password until you have locked something. In this example, we will lock out all Pay Per View events.

1. Press MENU and then **Locks** or press MENU-5. This menu will open.
2. Move the highlight to **Pay-Per-View** and press SELECT.
3. Move the highlight to **Enable All Locks** and press SELECT.
4. Select **Done**.

5. The **Enter your new password** menu will open. Enter a new 5-digit password and then enter the same password again

6. Select **Done** to save the password and exit this screen.

Very Important: After you create a password and select **Save** you will not be able to create or delete any locks without first using this password! Be sure to remember this password!

CHANGE THE PASSWORD

If you need to change the password.

1. Press MENU and then 5 or select MENU and then **Locks**. The **Password** screen displays.

2. Enter your password. The **Locks** screen displays. Scroll to and disable the **Enable All Locks** option. The check mark will disappear. Scroll back to **Done** and press SELECT. You will see a warning that tells you to enable locks.

3. Press MENU and then 5 or select MENU and then **Locks**. The **Locks** screen displays.

4. Select a **Lock** you wish to set, for example, **Pay Per View.** SELECT **Enable All Locks**. Select **Done**.

5. The **Enter your new password** menu will open.

6. Put in your new 5-digit password and then the same password again.

7. Select **Done**.

IF YOU FORGET THE PASSWORD

If you forget the password, you *must* call the Customer Service Center at 1-800-333-DISH (3474). You may need to give us information such as your name, your address, your telephone number, the receiver serial number (see *Ordering Your Program Packages* on page 4), and your PIN, if you use one.

USING THE LOCKS MENU

You can use the Locks menu to lock out other family members from viewing all Pay Per View events, from viewing any adult programs, from viewing certain channels, and more. Here's how.

TO LOCK PAY PER VIEW EVENTS

1. Press MENU-5 on the remote or press MENU and then select **Locks**.
2. The **Locks** menu will open *unless you have already set a password*. In this case, the password menu will open and you will have to enter the 5-digit password.
3. Move the highlight to **Pay Per View** and press SELECT.
4. Move the highlight to **Enable All Locks**, and press SELECT.

5. Select **Done**.
6. If you have not yet created a password, the **Password** screen will open.
7. Enter a new 5-digit password, and then enter the same password again.
8. Select **Done** to save the password and exit this screen.

Note: Once you create a password, you will not be able to create or change any locks without first entering it. Be sure to write down your password and keep it in a safe place.

TO UNLOCK PAY PER VIEW EVENTS

1. Press MENU-5 on the remote or press MENU and then select **Locks**.
2. The Password screen will open. Enter your 5-digit password and select **Done**.
3. The **Locks** menu will open. Move the highlight to **Pay Per View** and press SELECT. The check mark will disappear.
4. Select **Done**.

TO HIDE ALL ADULT CHANNELS

You can hide all adult channels so that they will not be listed in the **Program Guide**, **Browse Banner** or **Program Banner**, and so that no one can view them without using the password you create. Here's how.

1. Press MENU-5 on the remote or press MENU and then select **Locks**.
2. The **Locks** menu will open unless you have already set a password. In this case, the password menu will open, and you will have to enter the 5-digit password.
3. Move the highlight to **Hide Adult** and press SELECT.
4. Move the highlight to **Enable All Locks**, and press SELECT. If the system is locked, skip this step.
5. Select **Done**.
6. If you have not yet created a password, the **Password** screen will open.
7. Enter a new 5-digit password, and then enter the same password again.
8. Select **Done** to save the password and exit this screen.

Note: Once you create a password, you will not be able to create or change any locks without first entering it. Memorize your password.

TO UNHIDE ALL ADULT CHANNELS

1. Press MENU-5 on the remote or press MENU and then select **Locks**.

2. The Password screen will open. Enter the 5-digit password.

3. The **Locks** menu will open. Move the highlight to **Hide Adult** and press SELECT. The check mark will disappear.

4. Select **Done** to exit this screen.

Note: Remember — once you unhide adult channels, they will be shown in the **Program Guide, Browse Banner** and **Program Banner,** and anyone will be able to view any of them.

TO LOCK PROGRAMS BY RATING CODE(S)

You can also lock out programs by rating codes that you do not want family members to view without using the password you create.

1. Press MENU-5 on the remote or press MENU and then select **Locks**.
2. The **Locks** menu will open unless you have already created a password. In this case, the password menu will open, and you will have to enter the 5-digit password.

3. Move the highlight to **Rating Locks** and press SELECT.
4. The **Rating Locks** menu will open.
5. Move the highlight to the rating you wish to lock.

Note: When you select an **MPAA Rating,** the receiver will automatically lock the ratings for all programs rated more mature than the one you selected. For example, if you select **R**, both **NC-17** and **NR/AO** will also be automatically locked. However, for **Extended Ratings**, you must select each rating. In other words, locking **V** (Violence) does not automatically lock **L** (Language) or **N** (Nudity).

6. Select **Done**.
7. You will return to the **Locks** Menu.
8. Select **Enable All Locks**. A check mark displays in the selection.
9. Select **Done**.

Tip: You must have the Enable All Locks option selected for the locks to work.

TO UNLOCK PROGRAMS BY RATING CODE(S)

1. Press MENU-5 on the remote or press MENU and then select **Locks**.
2. The Password screen will open. Enter your 5-digit password and select **Done**.
3. The **Locks** menu will open. Move the highlight to **Rating Locks** and press SELECT. The check mark will disappear.

4. The **Rating Locks** menu will open.
5. Move the highlight to the rating code(s) you want to unlock and press select.
6. Select **Done** to exit this screen.
7. Select **Done** again.

About Rating Code Locks

Note: Satellite programs, which you get via the satellite, are different from *TV programs*, which you get with a TV antenna.

- Rating code locks use the codes the *original program providers* assign to the programs. The actual content of the programs *may be different* from the assigned ratings. *No* rating system can guarantee that *all* unwanted material is screened out.
- Like all other locks, these locks work *only* when you lock the receiver.
- You can lock *any* satellite program, *even* a Pay Per View program.
- The locks built into some TVs ("V chip" locks) *don't* work for satellite programs.
- TV program ratings are *different* from movie ratings.
- Receiver locks *don't* work for TV programs you watch off-air or via cable.
- Here's what the **Rating Codes** mean:

  G: General Audience. Suitable for young children.
  PG: Parental Guidance suggested.
  PG-13: Parental Guidance suggested. Not recommended for children under 13.
  R: Restricted. Not recommended for children under 17 unless accompanied by an adult.
  NC-17: Not recommended for Children under the age of 17.
  NR/AO: Not Rated/Adult Oriented

  Expanded Ratings:
  L: Language. Adult language.
  V: Violence. Graphic Violence.
  SC: Sexual Content. Sexual scenes.
  N: Nudity. Nude scenes.

TO LOCK SPECIFIC CHANNELS

1. Press MENU-5 on the remote or press Menu and then select **Locks**.
2. The **Locks** menu will open unless you have already created a password. In this case, the password menu will open, and you will have to enter the 5-digit password.

3. Move the highlight to **Channel Locks** and press SELECT. The check mark will disappear.

If you have not yet created a password, the **Password** screen will open, and you will need to create a 5-digit password.

Note: Once you create a password, you will not be able to create or change any locks without first entering it. Be sure to write down your password and keep it in a safe place.

4. The **Channel Locks** menu will open.

5. Move the highlight to a channel you wish to lock out and press SELECT. Continue selecting channels until you have selected all you want to lock out.
6. Select **Done.**
7. You will return to the **Locks** menu. Select **Enable All Locks**. A check mark displays in the selection.
8. Select **Done**.

If you make a mistake and select a channel you do not want to lock out, move the highlight back to that channel and press SELECT. If you want to discard all the channel locks and start over, select **Unlock All.**

Tip: You must have the Enable All Locks option selected for the locks to work.

TO UNLOCK SPECIFIC CHANNELS

1. Press MENU-5 on the remote or press MENU and then select **Locks**.
2. The Password screen will open. Enter the 5-digit password and select **Done**.

3. The **Locks** menu will open. Move the highlight to **Channel Locks** and press SELECT.
4. The **Channel Locks** menu will open.

5. Move the highlight to the channel(s) you want to unlock and press select.
6. When you have finished unlocking channels, select **Done** to exit this screen.
7. Select **Enable All Locks.** A check mark displays in the selection.
8. Select **Done.**

Tip: You must have the Enable All Locks option selected for the locks to work.

LOCK OR UNLOCK THE RECEIVER FRONT PANEL BUTTONS

Note: You can lock the receiver buttons and hide the remote to limit how people use the receiver.

1. Press MENU and then 5 or press MENU and select **Locks.** If you have created a password, the password screen will open. Enter the 5-digit password. The **Locks** menu will open.

2. Select the **Front Panel** option.
3. Select **Enable All Locks** to lock the front panel. A check mark displays in the selection.
4. Select **Done** to exit this menu.

To unlock the receiver front panel buttons:

1. Press MENU-5 on the remote or press MENU and select **Locks**.
2. The password screen will open. Enter the 5-digit password. The **Locks** menu will open.

3. Select the **Front Panel Lock** option. The check mark will disappear.
4. Select **Enable All Locks**.
5. Select **Done** to unlock the front panel and exit this screen.

Tip: You must have the Enable All Locks option selected for the locks to work.

LOCK OR UNLOCK THE RECEIVER

- If you try to watch a locked channel or program or open the **Locks** menu, the receiver displays a message that tells you to enter the password.
- The receiver gives you three tries to enter the right password. If you cannot do this, the receiver does not let you try again for several minutes.
- If you enter the right password, you can watch a locked channel or program or open the **Locks** menu.
- If you exit a locked channel or program or the **Locks** menu, you *must* enter the 5-digit password *again* to see the channel, program, or **Locks** menu again.
- If you unlock the receiver, leave the locks unchanged, and then lock the receiver *again*, you apply the *same* locks as before.

Watch a Locked Channel or Program

1. Select a locked channel or a program. The receiver displays a message that tells you the channel or program is locked.
2. Enter the 5-digit password.

USING CALLER ID

Caller ID displays the names of people as they call you *if you subscribe to caller ID from your local phone company.* **Caller ID** also has a call history feature which allows you to review past calls.

TURN THE CALLER ID ON OR OFF

1. Press MENU on the remote and then 4-2, or select **Preferences** and **Viewer Preference.** This screen will open.

2. Move the highlight to **Caller ID PopUp Enable**. To turn Caller ID on, press SELECT until the check mark is in the dot. To turn Caller ID off, press SELECT until the check mark is not in the dot.
3. Select **Done**.

WHEN YOU RECEIVE A CALL

When you receive a call, you will see a **Caller ID** popup screen.

Note: For your Caller ID to work, you must connect your phone line to the phone jack on the back of the receiver.

Note: Caller ID is a service from your local phone company. You must subscribe to their Caller ID service for the Caller ID feature of the receiver to work.

You can select **OK** to eliminate the message or do nothing, and it will disappear after 20 seconds. **Caller ID** is on unless you decide to turn it off.

If you are in a menu when a call comes in, you will see a different **Caller ID** popup screen.

CALLER ID HISTORY

Anytime you want to review the **Call History Log**, press MENU, and then select **Staying In Touch**, and **Caller ID** or press MENU-2-1.

- To delete calls from the **Call History Log**, select the call (or calls), and then select **Delete**.
- To clear all calls from the log, select **Clear All**.
- Select **Done** to exit this menu.

HOW TO CHANGE LANGUAGES

An alternate language may be available for a particular program.
Some programs, such as movies, show at the start whether an alternate language is available. An alternate language applies *only* to the audio part of a program and does *not* change the language used in the receiver menus.

1. Press the MENU button.

2. Select **Preference** and **Language** or press MENU-4-3.
3. The **Language** list will open. Select the language of your choice.

4. Select the **Done** option to save your choice.

How to Set Up the Receiver to Control a VCR

To use *VCR Event Timers*, you *must* connect the receiver back panel audio/video outputs to the audio/video inputs on the VCR.

To use *VCR Event Timers*, you *must* set up the receiver to control the VCR (see below). If the receiver *cannot* control the VCR, use an *Auto-Tune Event Timer* to tune the receiver to the channel you want to record. Use the timers built into the VCR to start and stop the VCR at the right times.

The receiver front panel IR Blaster sends an IR signal to control the VCR. This signal is strong enough to bounce off walls or other objects on its way to the VCR. However, shelves or smoked glass doors between the receiver and the VCR may block the signal. If the signal has to cross a very large room, or bounce off curtains, it may not be strong enough to control the VCR. For best results, make sure nothing blocks the signal.

The receiver starts the VCR recording, but does not turn on the VCR. Make sure you leave the VCR turned on. You must also have a videotape in the VCR.

1. Get the VCR device code from the *Device Codes* that begin on page 96.
2. Press the MENU button.

3. Select the **System Setup** option. then **VCR** or press MENU-6-4.
4. The **VCR Setup** menu will open. Use the number buttons to enter the VCR device code.

5. Make sure the VCR is turned on and its channel switch is set to 3 or 4 to match the setting of the receiver back panel channel 3/4 switch. Insert a videotape.

6. To test the device code, highlight the **Test** option. The receiver displays a message that warns you to make sure the VCR is turned on.
7. Press the SELECT button to start the test. The VCR records for a few seconds, stops, and then rewinds. The receiver displays a message that says the VCR test is done. Follow the instructions on the message. If the VCR did not do the test, enter another device code from the *VCR* table, and then repeat steps 2 through 6 and this step.

8. Once you have found the right VCR code, select the **Save** option to save the VCR code you entered.

HOW TO USE DOLBY® DIGITAL SOUND

Dolby® Digital gives you the capability to enjoy programs in surround sound. An external Dolby® Digital decoder is required in order to enjoy full 5.1-channel surround sound, or you can use a Dolby® Surround Pro Logic decoder to listen to 4-channel surround sound. The receiver provides a digital audio output. However, not all programs contain a Dolby® Digital sound track. The receiver has two audio types: Dolby® Digital and Linear PCM (which is limited to mono or stereo sound).

1. Connect an external Dolby® Digital decoder to the receiver's back panel Digital Audio Output.
2. Press the MENU button.

3. Select the **System Setup** and **Dolby® Digital** or press MENU-6-8 to open this screen.

4. Select the **Dolby® Digital** option.
5. Select one of the following options:
   - **Dolby® Digital Only** - Select this option if the stereo system or amplifier can decode *only* Dolby® Digital and will not process Linear PCM signals. See your amplifier owner's manual for more details on the amplifier.
   - **PCM Only** - Select this option *only* if the stereo system or amplifier *cannot* decode Dolby® Digital signals.
   - **Dolby® Digital/PCM** - Select this option *only* if the stereo system or amplifier can decode *both* Dolby® Digital and Linear PCM signals.
6. Select the **Done** option to save the settings.

Note: If you are using a Pro Logic decoder, you can connect to either the receiver's analog outputs (left and right) or to the Digital Audio Output — if your decoder will accept PCM Input.

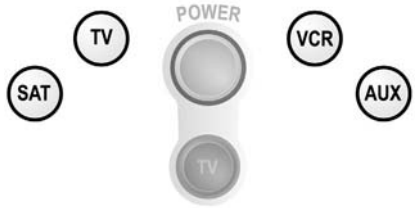
USING THE REMOTE TO CONTROL OTHER DEVICES

REMOTE CONTROL MODES

You can set the remote to four different modes to control the receiver or other devices.

Set up the remote to control a device like a TV or a VCR. See *Set Up the Remote to Control Other Devices* on page 84 for what to do.

Note: The remote comes already set up to control the receiver, unless you have changed the address on your receiver.



Use the remote control's mode buttons, SAT ("satellite" receiver), TV, VCR (for a VCR or a DVD player), and AUX ("auxiliary," for a cable TV box, a tuner, a second TV, a second VCR, a DVD player, or an audio amplifier) to set the remote to the right mode for the device. To change the mode, press the button for the device you want the remote to control. The mode button stays lit for two seconds to show you've set the remote to that mode.

LIMITED MODE

You can program your remote control in limited mode to keep from accidentally changing the channel on your TV or VCR. When you use the remote to control your TV in limited mode, you will only be able to use the POWER, MUTE, and VOLUME buttons. Also, when you use the remote to control your VCR in limited mode, you will only be able to use the POWER and VCR function buttons.

The section *Set Up the Remote to Control Other Devices* has a step that tells the remote control to go into limited mode.

Note: Limited mode is not used with cable boxes or amplifiers.

SETTING UP TO CONTROL OTHER DEVICES

You can set up the remote to control other devices using the device codes listed on page page 96.

1. Turn the device on.	Use the device's front panel buttons or its remote control.
2. Find the brand name of the device in the tables starting on page 148.	If the brand isn't listed, see *Scan for Device Codes* on page 85.
3. Press and hold the mode button until all the other mode buttons light up, and then let go of the button. The mode button flashes.	For example, hold the TV mode button for a TV until all of the other mode buttons light. When you let go, the TV mode light will flash.
4. *For AUX mode only.* Press 0 for a second TV, or 1 for a second VCR, or 2 for a tuner, amplifier, or cable box.	This step is for programming which kind of device that should be programmed in AUX mode. If you're not programming in AUX mode, skip to step 5.
5. Enter one of the three-digit device codes from the table using the number buttons.	The three-digit device code should be for the brand name of your device that you found in step 2.
6. If you want to program limited mode, press 1. If not, skip to step 7.	See *Limited Mode* for more information.
7. Press the POUND (#) button.	If you entered the code correctly, the mode button flashes three times.
8. Press the blank POWER button to turn off the device. If the device does not turn off, go to step 10.	If the code works, the device should turn off.
9. Turn the device back on and try some other buttons to make sure they work. If the code works for other buttons, stop here.	Sometimes the blank POWER button works when other buttons don't.
10. If the code doesn't work, redo steps 3 through 9 with another device code from the tables.	Try every code listed for you brand until one works for your device.
11. If you can't find a code that works try, *Scan for Device Codes* below.	

SCAN FOR DEVICE CODES

If the code for your device is not listed in the tables starting on page page 96, use this procedure to scan the remote control's memory for the device code.

1. Turn the device on.	Use the device's front panel buttons or its remote control.
2. Press and hold the mode button until all the other mode buttons light up, and then let go of the button. The mode button flashes.	For example, hold the TV mode button for a TV until all of the other mode buttons light. When you let go, the TV mode light will flash.
3. *For AUX mode only.* Press 0 for a second TV, or 1 for a second VCR, or 2 for a tuner, amplifier, or cable box. Then press the STAR (*) button.	This step is for programming which kind of device that should be programmed in AUX mode. If you're not programming in AUX mode, skip to step 4.
4. Press the blank POWER button.	This puts your remote in the scan mode.
5. Press the UP or DOWN ARROW button repeatedly until the device turns off.	As you press the UP or DOWN ARROW button, the remote is trying each code in the memory to see if it can turn off your device. When the device turns off, you have found a code that might work. **Note**: The mode button for the device will flash rapidly eight times when you've scanned all the codes for that device.
6. Press the Pound (#) button.	This stores the code you found.
7. Turn the device back on and try some other buttons to make sure they work.	Press the blank POWER button to turn the device back on. Try some other buttons to make sure they work. Sometimes, the blank POWER button works when other buttons don't.
8. Repeat this procedure until you've tried all the codes.	You may need to repeat the scan to find the best code for your device.

CHECK THE DEVICE CODES

You can find out what device code you've set for each remote control mode.

1. Press and hold the mode button until all the other mode buttons light up, and then let go of the button.

   The mode button flashes.

   For example, hold the TV mode button for a TV until all of the other mode buttons light. When you let go, the TV mode light will flash.

2. Press the Pound (#) button twice.
   Watch the mode light to determine your code. The mode button flashes the number for each digit of the device code, with a pause between the groups of flashes. A quick flash is for zero.

   For example, if the code is 570, the mode button flashes five times, pauses, flashes seven times, pauses, and flashes once quickly.

3. For AUX mode only.The first group of flashes tells you what the AUX mode controls. A quick flash (zero) before the three-digit code is for a TV; one regular flash is for a VCR; and two flashes is for a tuner, amplifier, or cable box.

   For example, if the TV code is 570, the AUX mode button flashes once quickly (indicating 0 for TV), pauses, flashes five times, pauses, flashes seven times, pauses, and flashes once quickly.

SWITCH BETWEEN TV AND DEVICE VOLUME CONTROL

When you set up the remote to control a TV, the MUTE and VOLUME buttons control the TV volume. However, if you want to use the AUX mode to control a tuner or amplifier and the device has a volume setting, you can set up the remote to control the device's volume instead of the TV volume.

To set the remote to control the device's volume:

1. Press and hold the AUX mode button for four seconds, and then let go of it. The AUX mode button will blink.

2. Press the POUND (#) button.

3. Press the plus (+) side of the VOLUME button.

4. Press the 0 number button.

5. Press the POUND (#) button.
   The AUX mode button flashes three times.

6. Press the SAT mode button.

7. Press the plus (+) and minus (-) sides of the VOLUME button.
   The device's volume changes and the aux mode button lights instead of the TV mode button.

To set the remote back to control the TV volume:

1. Press and hold the TV mode button for four seconds, and then let go of it. The TV mode button will blink.

2. Press the POUND (#) button.

3. Press the plus (+) side of the VOLUME button.

4. Press the 0 number button.

5. Press the POUND (#) button.
   The TV mode button flashes three times.

6. Press the SAT mode button.

7. Press the plus (+) and minus (-) sides of the VOLUME button.
   The TV's volume changes and the TV mode button lights instead of the AUX mode button.

CONTROL A TV (OR A SECOND TV VIA AUX MODE)

Only the buttons we tell you about here control a TV. Some of the buttons we tell you about here may not control your TV. Please see your TV user's manual for information about the TV's features.

TV MODE BUTTON

Set up the remote to control the TV by following the instructions in *Set Up the Remote to Control Devices* on page 83. Press the TV mode button to set the remote to TV mode. The TV mode button flashes once to show you've set the remote to TV mode. Make sure you keep the remote in TV mode to use the buttons described here.

Note: You can set up the remote to control a second TV in AUX mode, the same way it controls the first TV in TV mode. See *Set Up the Remote to Control Devices* on page 83.

TV/VIDEO BUTTON

If the TV has video input options, use this button to switch the TV video input.

POWER/TV BUTTONS

Press *either* POWER or TV button to turn the TV on or off.

Note: If you set up the remote to control one TV in TV mode and another TV in AUX mode, pressing the TV POWER button will control *only* the TV you set up in TV mode.

MUTE BUTTON

Press this button to turn the TV sound on or off.

VOLUME BUTTON

Press this button to raise (+) or lower (**-**) the TV sound.

UP/DOWN ARROW BUTTONS

Use these buttons to change channels on the TV.

Note: These buttons do not change the channels on the TV if the remote control is in limited mode.

SELECT BUTTON

The SELECT button works as the Enter button for a TV.

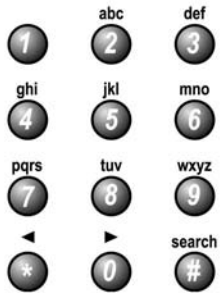
RECALL BUTTON

Press this button to go back to the last TV channel you watched. Press it again to switch between the last two TV channels you watched.

NUMBER BUTTONS

Use these buttons to directly enter a different channel.

Note: These buttons do not change the channels on the TV if the remote control is in limited mode.



CONTROL A VCR (OR A SECOND VCR VIA AUX MODE)

Only the buttons we tell you about here control a VCR. Some of the buttons we tell you about here may *not* control your VCR. Please see your VCR user's manual for info about the VCR's features.

You can set up the remote to control a second VCR in AUX mode, the same way it controls the first VCR in VCR mode. See *How to Set Up the Remote to Control Other Devices* on page 84.

VCR MODE BUTTON

Set up the remote to control the VCR by following the instructions in *Set Up the Remote to Control Other Devices* on page 84. Press the VCR mode button to set the remote to VCR mode. The VCR mode button flashes once to show you've set the remote to VCR mode. Make sure you keep the remote in VCR mode to use the buttons described here.

TV/VIDEO BUTTON

Use this button to switch the VCR between its TV mode and its VCR mode (see your VCR user's manual for information).

POWER BUTTON

Press the blank POWER button to turn the VCR on or off.

UP/DOWN ARROW BUTTONS

Use these buttons to change channels on the VCR.
Note: These buttons do not change the channel on the VCR if the remote control is in limited mode.

SELECT BUTTON

The SELECT button works as the PLAY button for a VCR. Press this button to play or to go back to playing a videotape that you had stopped or paused.

RECALL BUTTON

Press this button to go back to the last VCR channel you used. Press it again to switch between the last two VCR channels you used.

VCR BUTTONS

- Press the PLAY button to play or to go back to playing a videotape you had stopped or paused.

- Press the PAUSE button to pause a videotape. Press this button or the PLAY button to go back to playing the tape.

- Press the STOP button to stop playing or recording a videotape.

- Press the BACK button to rewind a videotape.

- Press the FWD (“fast forward”) button to fast forward a videotape.

- Press the RECORD button to record a videotape.

CONTROL A CABLE TV BOX

ATTENTION! Only the buttons described here control a cable TV box. However, some of the buttons we tell you about may not control your cable TV box. See your cable box user's guide for information about the box's features.

AUX MODE BUTTON

Set up the remote to control the cable TV box by following the instructions in *Set Up the Remote to Control Devices* on page page 83. Press the AUX mode button to set the remote to AUX mode. The AUX mode button flashes once to show you've set the remote to AUX mode. Make sure you keep the remote in AUX mode to use the buttons described in this section.

TV/VIDEO BUTTON

Use this button to switch the cable box between its TV mode and its video mode.

POWER BUTTON

Press the blank POWER button to turn on the cable box.

UP/DOWN ARROW BUTTONS

Use these buttons to change channels on the cable box.

SELECT BUTTON

The SELECT button works as the Enter button for the cable box.

RECALL BUTTON

Press this button to go back to the last cable channel you watched.

NUMBER BUTTONS

Use these buttons to enter numbers in a cable box menu.

CONTROL A TUNER OR AMPLIFIER

ATTENTION!

Only the buttons we tell you about here control a tuner or amplifier. However, some of the buttons we tell you about may not control *your* tuner or amplifier. Please see the user's guide for information.

AUX MODE BUTTON

Set up the remote to control the device by following the instructions in *Set Up the Remote to Control Other Devices* on page 83. Press the AUX mode button to set the remote to AUX mode. The AUX mode button flashes once to show you've set the remote to AUX mode. Make sure you keep the remote in AUX mode to use the buttons we tell you about here.

POWER BUTTON

Press the blank POWER button to turn the tuner or amplifier on or off.

MUTE BUTTON

Press this button to turn on or off the sound.
Note: Program the remote to control the device's volume by following the instructions on page 80.

VOLUME BUTTON

Press this button to raise (+) or lower (-) the sound volume.

Note: Program the remote to control the device's volume by following the instructions on page 80.

UP/DOWN ARROW BUTTONS

Use these buttons to change channels on the tuner or amplifier.

SELECT BUTTON

Use this button as the INPUT SELECT button for the tuner or amplifier.

Chapter 5

Installation Instructions

WARNING AND ATTENTION SYMBOLS

You must keep safety in mind when you install and use a satellite TV system. In these *Instructions*, we tell you how to do many things. If you do some of these things carelessly, you could hurt or even kill yourself, or damage equipment or property. Also, you need to pay special attention to some things.

Important instructions for maintaining the system.

The WARNING symbol means that if you're not careful, you could injure or *kill* yourself, or damage equipment or property.

The ATTENTION symbol means you should pay special attention to *Important Instructions* for using the system or for maintaining the system.

IMPORTANT INSTRUCTIONS FOR MAINTAINING THE SYSTEM

FOR YOUR SAFETY

Don't try to open the case of the receiver. You would risk electrical shock, which might damage the receiver and could hurt or *kill* you. There are *no* user-serviceable parts inside the receiver. If you open the receiver case or make unauthorized changes you'll void the warranty.

To reduce the risk of fire or electric shock, *don't* expose this appliance to rain or moisture.

IMPORTANT SAFETY INSTRUCTIONS

Be sure to review the Safety Instructions on page v before beginning this installation. Then, read and follow the instructions that begin below.

Always follow these instructions to help protect against injury to yourself and damage to the system.

SAFETY TIPS

You can get safety guidelines from the Occupational Safety and Health Administration (OSHA). To contact OSHA, please see the blue pages of your phone book, under *United States Government, Occupational Safety and Health Administration*.

•*Assemble* the satellite dish in a safe place *before* you climb up to where you install the dish.

- Be careful when *you climb* up to the satellite dish, and when you install it.
- If you use a *ladder*, follow the safety instructions that come with the ladder. Use only a fiberglass ladder to keep from getting shocked if the ladder touches any overhead power lines, lights, or power circuits.
- Use the right *tools*. Follow the safety instructions that come with the tools.
- While you work, don't wear loose-fitting *clothes* and do wear safe shoes.
- If you put the satellite dish on a *roof*, you should be in good enough shape to climb up to, and work on the roof. Also, keep these safety tips in mind:
    - •Beware of small holes in the roof or loose shingles, which could cause you to fall;
    - •Keep tools within easy reach for convenience and safety;
    - •Use a safety harness;
    - •Wear sturdy shoes with good tread for sure footing and traction;
    - •*Don't* work on a roof that's wet or icy;
    - •If the roof is sloped or made of tile or metal, use slide guards.
- Install the satellite dish only on a *solid* surface or solid foundation material. If you install it on the side of a building, make sure you attach the center bolts directly to a building stud or other solid material. Use the right drill and fasteners for the surface.
- Make sure you find the best place for the satellite dish *before* you drill holes in your building or set up the pole. Make sure that you can run the cable from the dish into your building. If you install a pole, make sure you can run the cable overhead, or underground to your building.

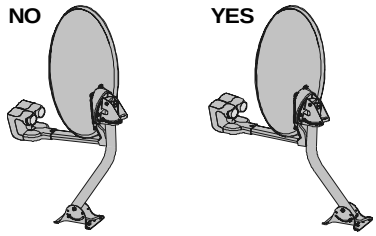
- *Before* you drill any holes in your building, make sure there are no wires or pipes near the holes. *Before* you dig any holes in the ground, ask the local gas, electric, and phone companies to help you find underground gas, electric, water, and phone lines.
- Do the install per the local building and electrical *codes*. If you aren't sure, call a licensed building inspector or electrician for help. Be aware that community covenants, if any, may have more requirements. Also, check your homeowner's insurance policy for any restrictions or exceptions that may apply.
- Choose a place for the dish you can *get to easily* in most weather. You may need to clean snow, dirt, or leaves off the satellite dish. Such things can interfere with the satellite signal.
- Put the satellite dish as *close* to the receiver as you can. Legacy systems can only use up to 100 feet of RG-6 cable between the receiver and the satellite dish. DishPro systems can use up to 200 feet of RG-6 cable between the receiver and the satellite dish. Otherwise, the system is more likely to lose the signal, especially during rain, snow, or heavy cloud cover. If the system requires over 200 feet of cable, you should think about having a pro install it.
- Think about *seasonal* changes. The place where you install the dish may have a clear line of sight in the winter, but spring and summer leaves could block the signal.
- As you work, be aware of *what's around you*. Be careful to avoid hurting yourself or damaging buildings, structures, or equipment.
- *Never* install the satellite dish near *power lines*.
- *Don't* install the satellite dish where it can be bumped or blocked by people, animals, or vehicles.
- *Don't* install the satellite dish where it's exposed to high winds. *Don't* try to install the satellite dish in windy or stormy weather, especially if there's a chance of lightning.
- *Don't* try to fasten the satellite dish to the *mortar* between bricks or cinder blocks.
- *Don't* install the satellite dish on vinyl or aluminum *siding*. Vinyl and aluminum are too weak to securely hold the dish, even with a building stud underneath.
- *Don't* install the satellite dish *downwind* of a chimney or furnace vent. Ashes and dirt could collect on the dish, which might cause damage and poor reception. If you can, place the dish so that it faces away from the vent.
- *Don't* install the satellite dish on *stucco* or imitation masonry unless the base material is solid.
- *Don't* install the satellite dish on *composite* materials such as strand, chip, fiber, or particle board unless the fastener attaches securely to a wall stud, rafter, or other foundation material beneath the surface.

- *Don't* install the satellite dish on a *railing*, on a tile roof, or in a tree. *Don't* install the satellite dish on a chimney that isn't structurally *sound*. Wind causes the dish to shake, and this can damage an unsound chimney. Install the dish on a chimney only if there's no other place to install the dish.

- Place the foot so you can aim the satellite dish *away* from the foot, as shown below.

  This gives the dish the most room to move when you aim it.

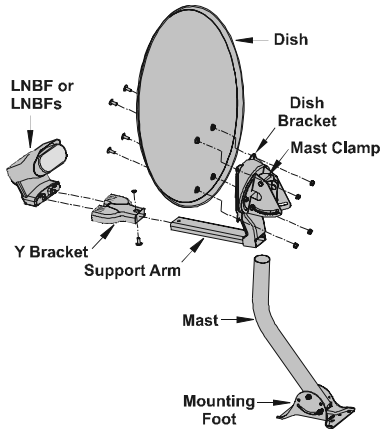
Tip: Notice that the figure marked "YES" has the dish pointed *away* from the foot.



BEFORE YOU START

UNPACK AND CHECK THE PARTS

Unpack the parts carefully. You could damage these devices if you bump or handle them roughly. Check all the parts for damage during shipment. If you find any damage, call the place where the you bought the system or the Customer Service Center at 1-800-333-DISH (3474) *before* you install the system. Keep the box and packing, in case you ever need to return the parts.



How to Use these Installation Instructions

These instructions guide you through the installation of a Satellite System which includes your DishPro receiver (included with this manual), and one of two kinds of dish antenna systems. The two antenna systems are:

- **DishPro** Antenna Systems which can be identified by the DishPro logo shown below.

- **Legacy** DISH antenna systems which *do not* have the DishPro logo.

Important: You cannot use DishPro LNBFs and switches (those marked with the DishPro logo) with Legacy switches and LNBFs (those that do not have the DishPro logo).

You must install your DISH antenna system with either all DishPro LNBFs and switches or all Legacy LNBFs and switches. If you mix the two, the system will not work.

Note: If you have a Dish antenna system already installed and the dish has been pointed for the strongest possible signal strength, you can skip this chapter and follow the instructions for installing the DishPVR receiver on page 3.

Installing a DISH 500 Antenna

Whether you are installing a DishPro or Legacy system, you will need to first assemble the satellite dish, mount it, and point it in the general direction of a satellite. To do this, follow these instructions:

Finding the Satellites

You need to find the satellites in the sky. To do this, you need to know the azimuth angle (the south, southeast, or southwest direction to the satellites) and the elevation angle (the angle up to the satellites) from your location, and the skew angle. Do the following to get these angles:

1. Connect the **TV Set Out** port on the receiver's back panel to the television's **RF Tuner Input** using a coaxial cable. Make sure that the TV is tuned to the same channel as the **Channel 3/4 Switch** on the receiver's back panel (for example, if this switch is at "3," the TV must be tuned to Channel 3).

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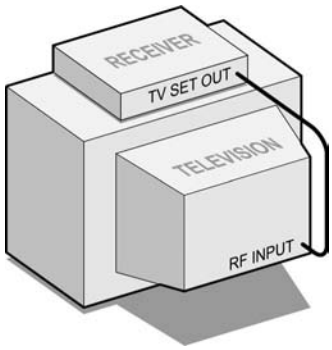


2. Make sure that the remote control batteries are fresh, and are installed properly. Press the SAT mode button on the remote to make sure the remote is in SAT mode to control the satellite receiver.
3. Turn ON the television and receiver.
4. Display the **Point Dish** menu, by pressing MENU on the Remote and then selecting **System Setup** and then **Point Dish,** or by pressing MENU-6-2 on the remote (unless the receiver already displays this menu).

5. Enter your ZIP code in the **ZIP Code** field.
6. Select the **DISH 500** option.
7. The receiver displays the **DISH 500 Setup** menu. The menu displays the azimuth, elevation, and skew angles as shown below. Write down these numbers in the space at left.

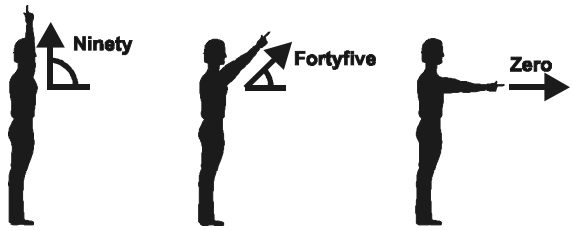
Azimuth: _____

Elevation: _____

Skew: _____

MOUNTING THE DISH

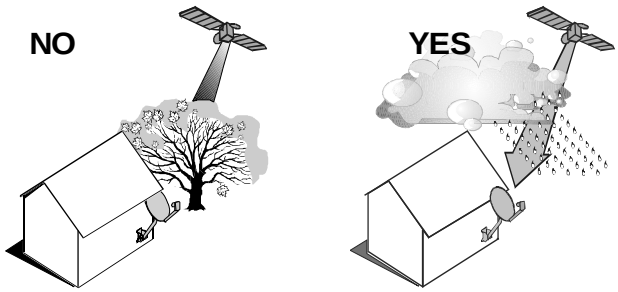
1. Using these azimuth, and elevation angles, find a location for the satellite dish which can be pointed towards the satellites located at these angles. With a compass, find the required azimuth angle. Then, use the elevation angle to find out how high the satellites are in the sky from your location.



Make sure nothing blocks the line of sight to the satellites.

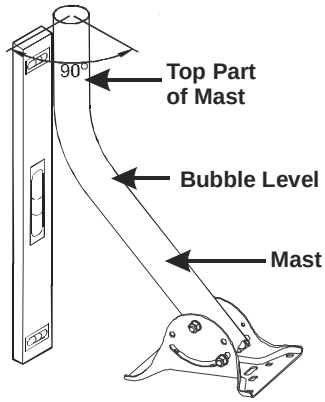
2. Make sure nothing blocks the line of sight to the satellites. Mount the mast to a solid surface so that the dish antenna cannot move or be bumped out of adjustment. Keep in mind that physical and environmental conditions can block your satellite dish's ability to receive a clear satellite signal. Make sure you mount the dish so there are no obstacles between the dish and the satellite. This will help keep the signal strength strong even in bad weather.

   Obstacles that can block the signal include eaves and overhangs on your building or house, wind, plant growth, and deterioration of the mounting surface. Never mount to a tree.

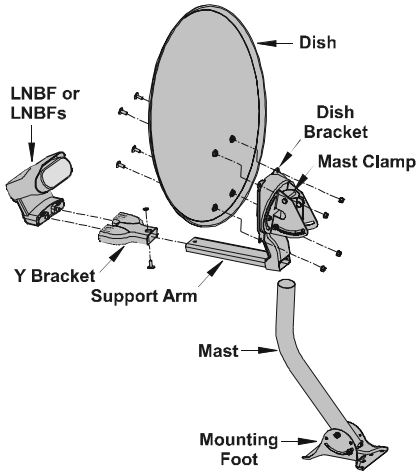


3. Align the top part of the mast so that it is absolutely vertical, as shown below. If the top part of the mast is off vertical by only a few degrees, it will be difficult or maybe even impossible for you to find the satellites.

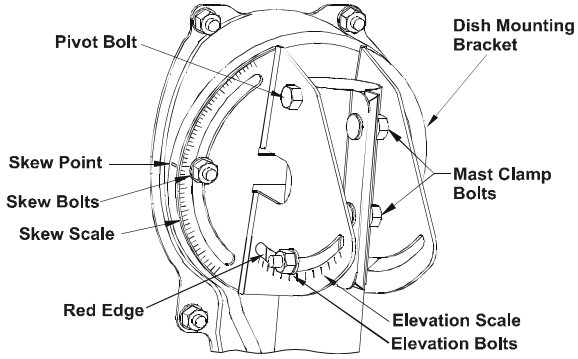
   Take at least two readings with a bubble level, on the upper mast, that are 90 degrees apart from one another.



4. Assemble the satellite dish as shown below.



5. Loosen both skew bolts and set the skew by rotating the dish mounting bracket to align the red mark with the required angle on the skew scale which you wrote down on page 102. Tighten the skew bolts securely to keep the dish from rotating. Once the skew is set, *do not* try to fine-tune this angle when aiming the dish.



6. Set the elevation by tilting the dish mounting bracket to align the red edge with the required angle on the elevation scale. Tighten the elevation bolts, but *do not* tighten the pivot bolt at this time.

INSTALLING A DISHPRO DISH 500 SYSTEM

The following instructions are for installing a two-tuner DishPro receiver in a system with a DishPro Twin LNBF. If you are installing a multi-dish system, you will need to follow these instructions and then the ones that begin on page 110. If you are installing a DISH 500 with Legacy LNBFs (with no DishPro logo), go to *Installing a DISH 500 Legacy System* beginning on *page 118*.

WARNING! Tighten all the coaxial cable connections *only* by hand. Using a wrench may over-tighten the connections, causing damage. Such damage is *not* covered by the Limited warranty.

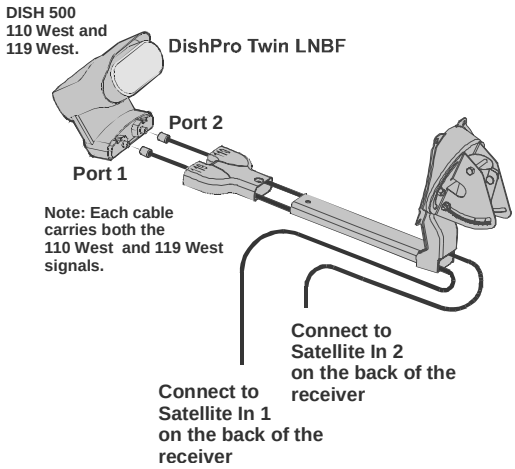
Note: DishPro systems have LNBFs and switches with the DishPro logo shown below.

Important: You cannot use DishPro LNBFs and switches (those marked with the DishPro logo) with Legacy switches and LNBFs (those without the DishPro logo). You must install your DISH antenna system with either all DishPro LNBFs and switches or all Legacy LNBFs and switches. If you mix the two, the system will not work.

Note: Since you are installing an all-DishPro system, you can have as much as 200 feet of cable between the LNBF and the receiver so long as you use only RG-6 coaxial cables *rated for 950 to 2150 MHz*. Some cables may say "Swept tested for 2150 MHz." If you have any doubt about this, ask your DISH retailer, or look on the container the cable came in. Do not use cable company TV cables or cables from other satellite TV systems not rated for 950-2150 MHz. These other cables may cause signal loss. Do not use existing cables such as RG-59. Also, be sure that any outdoor connections are made using waterproof "F-connectors."

1. Thread two RG-6 coaxial cables through the mast (optional), support arm and the Y-bracket. These cables should be long enough to run from your receiver to your LNBF.

2. Attach the Y-bracket, using the Y-bracket screw.
3. Connect the two RG-6 cables from the DishPro Twin LNBF directly to the **Satellite In 1** and **Satellite In 2** connections on the back of the receiver. Be sure there are no multi-dish switches between the LNBF and the receiver.


DISH 500
110 West and
119 West.
DishPro Twin LNBF
Port 2
Port 1
Note: Each cable carries both the 110 West and 119 West signals.
Connect to Satellite In 2 on the back of the receiver
Connect to Satellite In 1 on the back of the receiver

4. Attach the LNBF to the Y-bracket, using the two LNBF screws.

5. Slide the dish assembly down onto the mast. Make sure the pivot bolt rests on the top of the mast. Turn the dish assembly so that it points in the general direction of the satellites, using the azimuth angle from page 102.

6. Make sure both the receiver and your TV is on. You should see the **Point Dish** menu. If not, press Menu on the remote and select **System Setup**, then **Point Dish** or press Menu-6-2 on the remote.

7. Select **Switch.** The **Switch Matrix** screen will open.

8. Select **Check**. The receiver shows you a progress bar and a processing graphic.

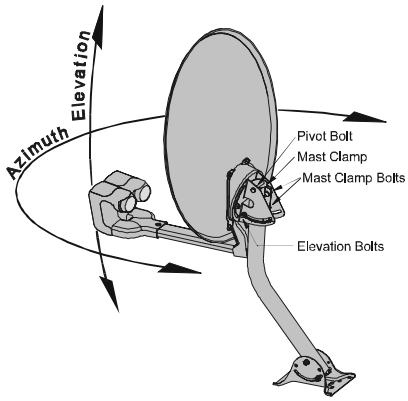
9. When the check switch procedure finishes, you should see an installation summary screen similar to the one shown below.

In the **Satellite** line, you will see Xs for both the **Satellite In 1** and **Satellite In 2** tuners. You will also see **Switch Type: No Switch** for both tuners.This is okay and does not mean there is anything wrong with your receiver. You should also see **Twin** next to **Device type** for both tuners. If your **Installation Summary** screen matches this, you can go directly to step #10. If not, do one of the following:

- If, by chance, you happened to pick up a satellite at this point, you may see “110” or “119” in the Satellite line. If “119” shows under **Port 1**, then go to step #10. If “119”shows under **Port 2**, move the dish about 9 degrees to the east, and then select **Check** to run **Check Switch** again. If “110” shows under **Port 2**, then go to Step #10.

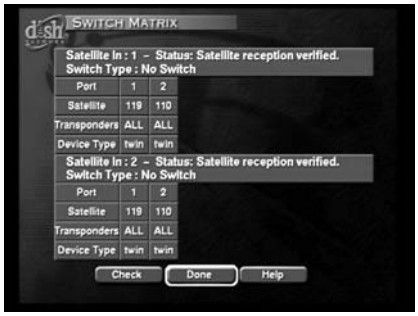
- If "110" shows under **Port 1**, move your dish about 9 degrees to the west, and then select **Switch** to run **Check Switch** again.

10. Select **Done** to return to the **Point Dish** screen. Make sure the check mark is next to **119 West.** If not, move the highlight to **119 West** and press Select. Also make sure there is a check mark next to **Sat Input 1**. If not, move the highlight to **Sat Input 1**, and press Select. Notice the signal strength bar. This is used to help you aim the dish by showing the strength of the signal you are receiving. Look at the signal strength bar while you aim the dish. Or, have one person aim the dish while another watches the signal strength or listens to the signal tone. Don't stand in front of the dish while you aim it, because your body will block the satellite signal. After you adjust the aim, let go of the dish so that it can settle back in place by itself. **Do not change the skew setting.**
11. Turn the dish back and forth ***very slowly,*** until the signal strength bar turns *green*. This shows you've found the signal.



Note: If you cannot find the signal, turn the dish back to the first azimuth angle. Then, loosen both elevation bolts *just enough* so you can tilt the dish. Tilt the dish up by two degrees, and then tighten both bolts. Now, turn the dish back and forth again. *If you still can't find the signal*, tilt the dish up again *very slightly* and turn the dish back and forth until you find the signal.

12. Once the signal strength bar is *green*, turn the dish back and forth ***just a little***, to where the signal strength bar shows the strongest signal. When you find the strongest signal, tighten both mast clamp bolts. Then loosen both elevation bolts, *just enough* so you can tilt the dish. Tilt the dish up and down ***just a little***, to where the signal strength bar shows the strongest signal. ***Do not adjust the skew.*** When you find the strongest signal, tighten all bolts in the dish assembly so the dish cannot be moved.
13. You are now ready to verify reception from both satellites. Select **Check**. When the **Switch Matrix** screen opens, select **Check**.The receiver shows a progress bar and a "Processing" indicator. When the procedure is finished, you will see the **Switch Matrix** screen again."



This time, you *must* see that you have signals from both the **110 West** and **119 West** Satellites *for both* **Satellite In 1 and Satellite In 2**, and the message "Satellite reception verified" for both satellite inputs. Select **Done** to exit this menu.

If you do not see "110," under **Port 2**:

- Check to make sure the skew angle you wrote down on page 102 is exactly the same as the skew angle you set in step #5 on page 105. If it is not, reset the skew angle as described on page 105. Following this, go back to page 108, and start over from step #10**.**

14. Look at the **Point Dish** menu. If you have good signal strength with the check mark in **119 West**, move the check mark to **110 West**. If you have good signal strength on **110 West**, go to step #15. If you do not have good signal strength with the check mark in **110 West**, repeat step #12, and fine-tune the dish but with the check mark in **110 West** instead of **119 West**. While the **110 West** and **119 West** signals will not be equal, you should be able to fine-tune the dish until you have the strongest possible signal from both satellites. When you have finished this, select **Check Switch**. When the **Check Switch** menu opens, select **Switch** to run **Check Switch** again.
15. Select **Done** to exit the **Point Dish** menu.
16. The receiver will begin taking a software upgrade in the background. You will be able to watch TV while this software upgrade is being downloaded from the satellite. However, you will be able to use only the **Browse Banner**, **Program Banner** and Up/Down/Left/Right arrows to find programs to watch during this time (for more information on this, see page 3 under "How to Get Started").

    Note: If you would like to see how the upgrade is progressing, press Menu and select **System Setup** and then **Software Update** or press Menu-6-7.
17. After about 45 minutes, you will see a message regarding the upgrade. When this upgrade finishes, you will be able to watch TV. If you will be installing a multi-dish system, follow the instructions that begin below. If you are installing a system with more than one receiver, you can turn to the DishPro Wiring Diagrams that begin on page 112 for more information.

INSTALLING A MULTIPLE DISH DISHPRO SYSTEM

Important: You cannot use DishPro LNBFs and switches (those marked with the DishPro logo) together with Legacy switches and LNBFs (those without the DishPro logo).You must install your DISH antenna system with either all DishPro LNBFs and switches or all Legacy LNBFs and switches. *If you mix the two, the system will not work.*

Note: Since you are installing an all-DishPro system, you can have as much as 200 feet of cable between the LNBF and the receiver so long as you use only RG-6 coaxial cables *rated for 950 to 2150 MHz*. Some cables may say "Swept tested for 2150 MHz." If you have any doubt about this, ask your DISH retailer, or look on the container the cable came in. Do not use cable company TV cables or cables from other satellite TV systems not rated for 950-2150 MHz. These other cables may cause signal loss.

Do not use existing cables such as RG-59. Also, be sure that any outdoor connections are made using waterproof "F-connectors."

Once you have installed the DISH 500 with DishPro LNBFs (using the preceding instructions), you can now install a DISH 300 with a single DishPro LNBF as follows:

1. Turn on the television and the receiver if they are not already on. You should see the **Point Dish** screen. If not, press Menu on the remote and select **System Setup** and then **Point Dish, or** press Menu-6-2 on the remote.
2. Make sure there is a check mark next to the satellite your dish will be pointing at. If there is not, use the Up and Down arrows on the remote to move the highlight to the box next to the correct satellite, and then press select on the remote.

Azimuth: _____

Elevation: _____

3. Enter your Zip code to get the necessary azimuth and elevation. Write these down at leftt.
4. Mount the dish following the mounting instructions that came with it.
5. Connect an RG-6 cable *directly* from the Single DishPro LNBF to the **Satellite In 1** port on the DishPro receiver's back panel. Make sure there are no multi-dish switches between the LNBF and the DishPro receiver (refer to the wiring diagrams that begin on page 127 for detailed cabling instructions).
6. Point the dish for the strongest possible signal, following the instructions that came with it.
7. Connect any switches in your system, using the instructions that came with the switch(es).

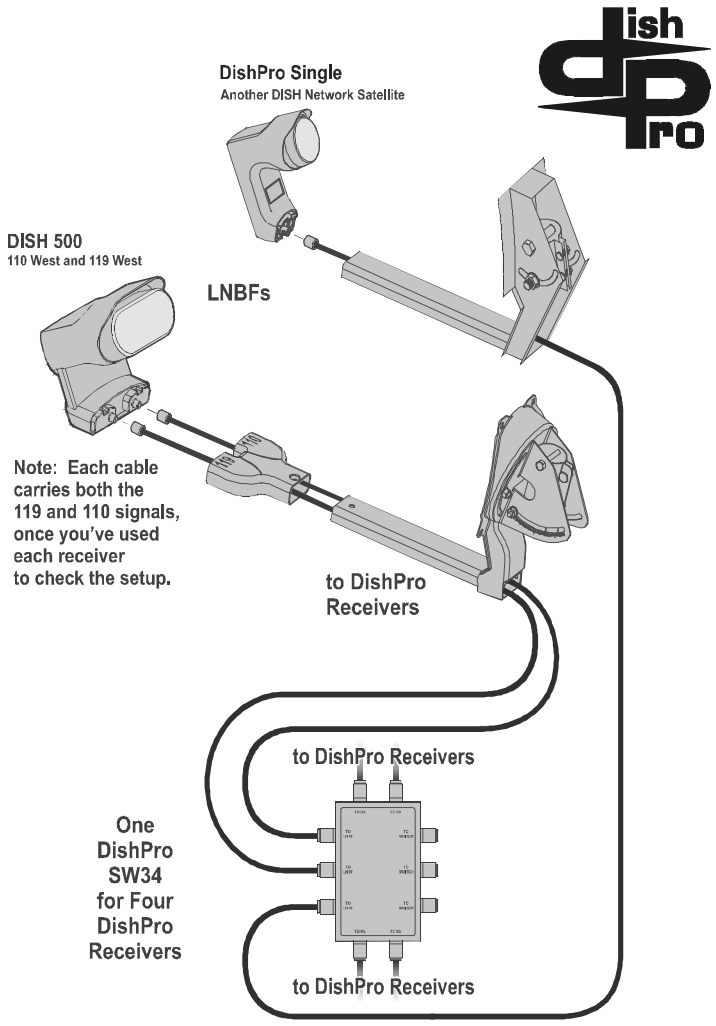
8. Select **Switch** from the **Point Dish** menu. When the **Check Switch** screen opens, select **Check**. When the procedure completes, you will see the **Switch Matrix** screen again. This time you should see that the switch(es) in your system has been correctly identified, and that both **Satellite In 1** and **Satellite In 2** show "Satellite reception verified" from all the satellites in the system appear in the "Satellite" line.
9. Select **Done** to exit this menu, and then **Done** to exit the **Point Dish/Signal** screen.
10. If there are other receivers in your system, make sure you run **Check Switch** on all of them.

DishPro Wiring Diagrams

DISH 500 with a DishPro Twin LNBF, One DishPro Single LNBF, One DP34 Switch, Up to Four Receiver Tuners (All DishPro)

WARNING! This diagram leaves out grounding to be clear. Make sure you ground the system per the *National Electrical Code* (NEC) and all local electrical codes.

Note: A DISH Network satellite receiver can have either one or two tuners, depending on the model.

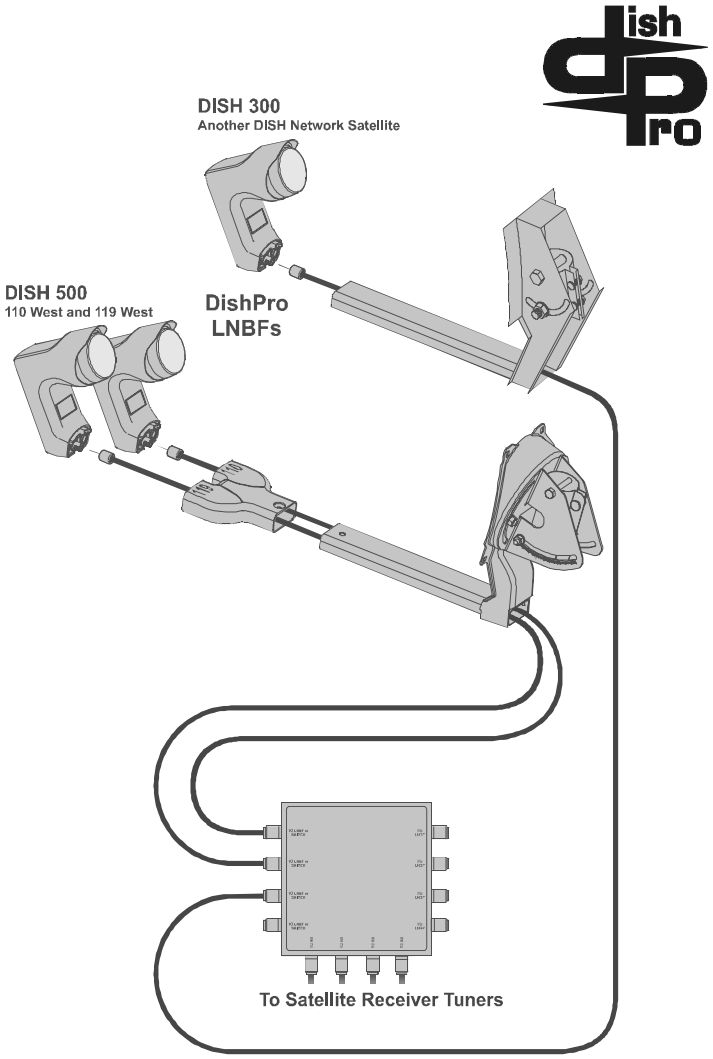

DishPro Single
Another DISH Network Satellite
DISH 500
110 West and 119 West
LNBFs
Note: Each cable carries both the 119 and 110 signals, once you've used each receiver to check the setup.
to DishPro Receivers
to DishPro Receivers
One DishPro SW34 for Four DishPro Receivers
to DishPro Receivers

Note: You can add more receivers to your system by using DP34 Switches as shown above.

TWO DISHES, THREE SINGLE-OUTPUT DISHPRO SINGLE LNBFS, THREE CABLES, ONE DP44 SWITCH, UP TO FOUR RECEIVER TUNERS (ALL DISHPRO)

WARNING! This diagram leaves out grounding to be clear. Make sure you ground the system per the *National Electrical Code* (NEC) and all local electrical codes.

Note: A DISH Network satellite receiver can have either one or two tuners, depending on the model.

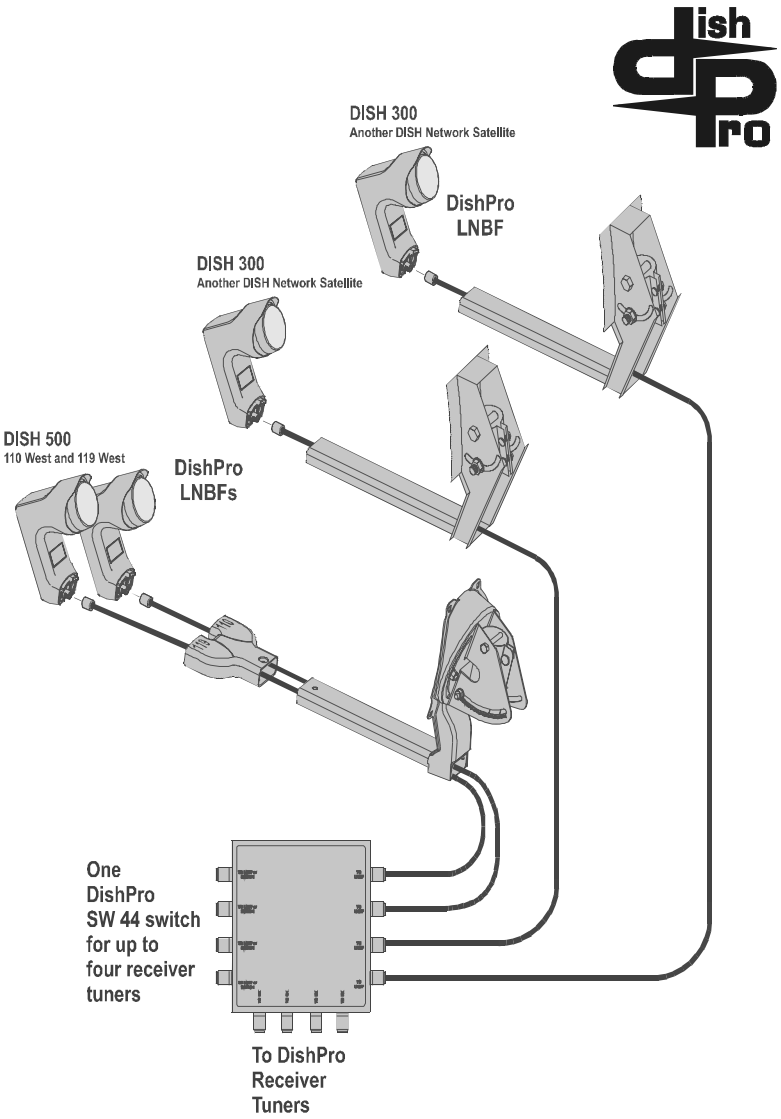


Note: You can add more receivers to your system by using DP44 Switches as shown above.

THREE DISHES, FOUR SINGLE-OUTPUT DISHPRO SINGLE LNBFS, FOUR CABLES, ONE DP44 SWITCH, UP TO FOUR RECEIVER TUNERS (ALL DISHPRO)

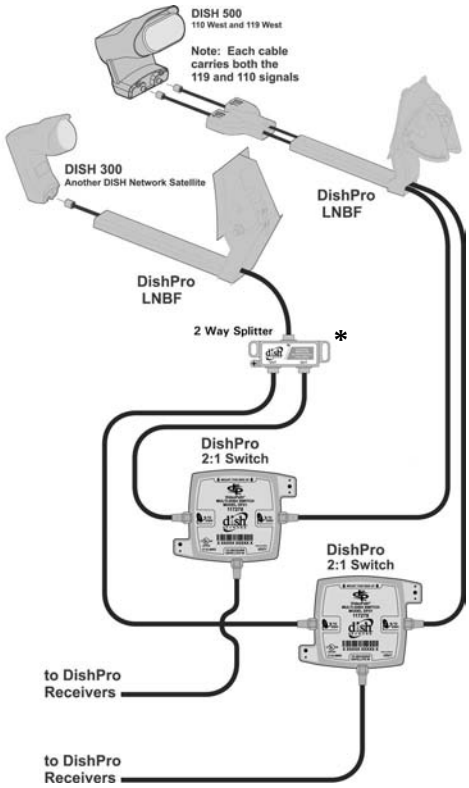
WARNING! This diagram leaves out grounding to be clear. Make sure you ground the system per the *National Electrical Code* (NEC) and all local electrical codes.

Note: A DISH Network satellite receiver can have either one or two tuners, depending on the model.



TWO DISHES, ONE DISHPRO TWIN LNBF, ONE DISHPRO SINGLE LNBF, ONE DISHPRO COMPLIANT SPLITTER, TWO DISHPRO 21 SWITCHES, TWO RECEIVERS. SUPPORTS TWO RECEIVERS FROM THREE SATELLITE LOCATIONS.

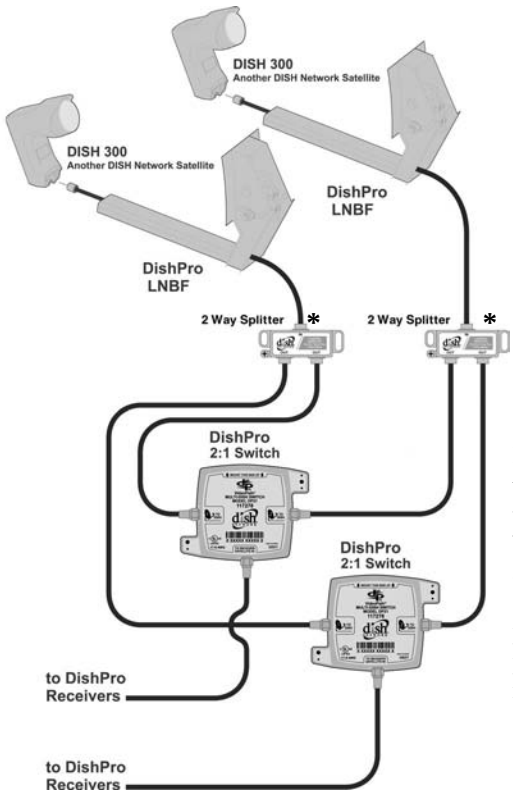
WARNING! This diagram leaves out grounding to be clear. Make sure you ground the system per the *National Electrical Code* (NEC) and all local electrical codes.



* When using a DishPro compliant splitter to split the signal from a DishPro single LNBF, the receiver whose DP21 switch is connected to the passing side of the splitter must be plugged into a live power outlet at all times. If not, the DishPro single LNBF will not have any power and will not be able to provide satellite signal to the other receiver.

TWO DISHES, TWO DISHPRO SINGLE LNBFS, TWO DISHPRO COMPLIANT SPLITTERS, TWO DISHPRO 21 SWITCHES, TWO RECEIVERS. SUPPORTS TWO RECEIVERS FROM TWO SATELLITE LOCATIONS.

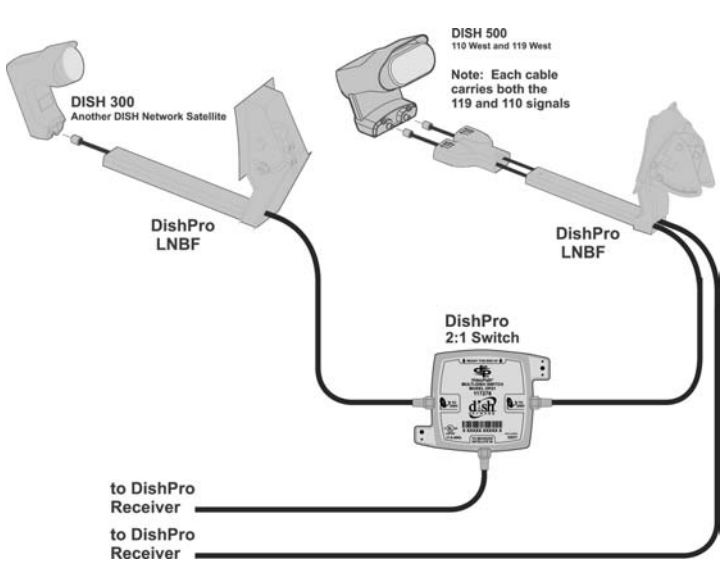
WARNING! This diagram leaves out grounding to be clear. Make sure you ground the system per the *National Electrical Code* (NEC) and all local electrical codes.



* When using a DishPro compliant splitter to split the signal from a DishPro single LNBF, the receiver whose DP21 switch is connected to the passing side of the splitter must be plugged into a live power outlet at all times. If not, the DishPro single LNBF will not have any power and will not be able to provide satellite signal to the other receiver.

ONE DISH 500 WITH A TWIN LNBF, ONE DISH 300 WITH A SINGLE LNBF, AND ONE DP21 SWITCH. SUPPORTS ONE RECEIVER FROM THREE SATELLITE LOCATIONS AND ONE RECEIVER FROM TWO SATELLITE LOCATIONS.

WARNING! This diagram leaves out grounding to be clear. Make sure you ground the system per the *National Electrical Code* (NEC) and all local electrical codes.



INSTALLING A LEGACY DISH 500 SYSTEM

If the LNBFs in your system do not have the DishPro logo, you are installing a Legacy system.

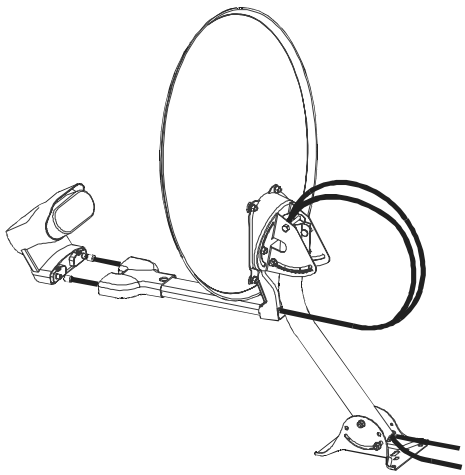
Important: You cannot use DishPro LNBFs and switches (those marked with the DishPro logo) with Legacy switches and LNBFs (those without the DishPro logo).

Note: If you are installing a Legacy system with dual LNBFs, follow the instructions that begin below. If you will be installing a Legacy system with a Twin LNBF, skip the following section and go to page 118.

FOR INSTALLING A LEGACY SYSTEM WITH A TWIN LNBF

Note: If you are installing a Legacy (non-Dishpro) LNBF (that does not have a DishPro logo), *you can have as much as 100 feet* of cable between the satellite dish's LNBF connectors and the receiver, so long as you use only RG-6 cables. Also, be sure that any outdoor connections are made using waterproof "F-connectors."

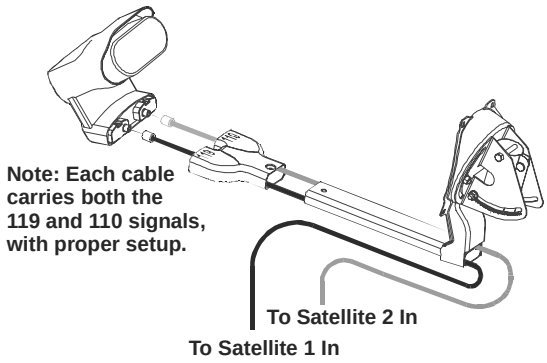
1. Once you have the dish mounted, per the instructions titled *Installing a DISH 500 Antenna* that begin on page 101, thread two coaxial cables through the support arm, mast (optional), and the Y-bracket. The cable should be long enough to reach from the LNBF on the satellite dish to the receiver.



2. Attach the Y-bracket, using the Y-bracket screw.

3. Connect one RG-6 cable from the **Satellite 1 In** connection on the back of the receiver *directly to one port of the* Twin LNBF. Connect the second RG-6

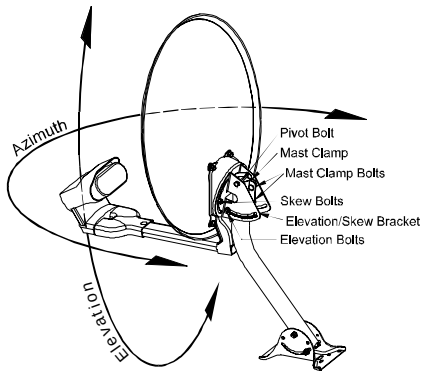
cable from the **Satellite 2 In** connection directly to the other port of the Twin LNBF. Be sure there are no multi-dish switches between the LNBF and the receiver.



4. Attach the LNBF to the Y-bracket using the two LNBF screws.
5. Slide the dish assembly down on the mast. Make sure the pivot bolt rests on the top of the mast. Turn the dish assembly so that it points in the general direction of the satellite, using the azimuth angle from page 102.
6. Turn On the television and the receiver. The **Point Dish** menu should be displayed (see example below).

If not, press Menu on the remote and then select **System Setup** and then **Point Dish** or press Menu-6-2 on the remote. Select the **119 West** option and the **Dish 500** option if they are not already selected.

7. Turn the dish back and forth *very slowly,* until the signal strength bar turns *green*. This shows that you have found the signal.



Note: If you cannot find the signal, turn the dish back to the original azimuth setting. Then, loosen both elevation bolts *just enough* to be able to tilt the dish. Tilt the dish up by two degrees, and then tighten both bolts. Now, try turning the dish back and forth again. Repeat these steps, raising and lowering the elevation, until you find the satellite signal.

8. Once you have a signal, turn the dish assembly back and forth very slightly until the signal strength bar displays the strongest possible signal strength. Tighten the mast clamp bolts. Then, loosen the elevation bolts and adjust the elevation of the dish up and down slightly until the signal strength bar displays a strong signal. *Do not adjust skew.* Tighten all the bolts in the dish assembly so that the dish cannot be moved.

9. Select **Switch** from the **Point Dish** menu. When the **Switch** menu opens, select **Check**. The receiver will check your satellite system. After the system checks your installation, an **Switch Matrix** screen will appear.

SWITCH MATRIX
Satellite In : 1 – Status: Satellite reception verified.
Switch Type : SW44
Port 1B 1A 2B 2A
Satellite 119 119 110 110
Transponders ODD EVEN ODD EVEN
Satellite In : 2 – Status: Satellite reception verified.
Switch Type : SW44
Port 1B 1A 2B 2A
Satellite 119 119 110 110
Transponders ODD EVEN ODD EVEN
Check
Done
Help

10. Verify that the 119 and 110 satellites are verified for both tuners. Select **Done**.

11. At the **Point Dish** menu, select the **110 West** option and verify that you have a green signal strength bar with a locked signal.

    • If there is no signal strength on **110 West,** check your connections and

select **Check Switch** again. If there is still no signal, confirm that your skew angle is correct, and start over with step #3.

- If the signal from the **110 West** satellite is weak and you do not see a green signal strength bar, repeat step #7 to fine-tune the dish until you have good signal strength for both the **119 West** and **110 West** satellites.

12. When you have the strongest possible signal, select **Done** to exit the **Point Dish** menu.
13. The receiver will begin taking a software upgrade in the background. You will be able to watch TV while this software upgrade is being downloaded from the satellite. However, you will be able to use only the **Browse Banner**, **Program Banner** and Up/Down/Left/Right arrows to find programs to watch during this time (for more information on this, see page 3 under "How to Get Started").

    Note: If you would like to see how the upgrade is progressing, press Menu and select **System Setup** and then **Software Update** or press Menu-6-7.

If you will be installing a multi-dish system, follow the instructions that begin on page 125.

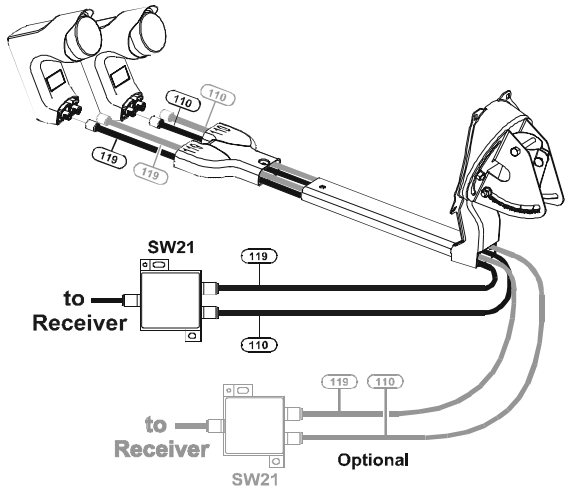
FOR INSTALLING A LEGACY DISH 500 SYSTEM WITH TWO DUAL LNBFS

Note: If you are installing a Legacy LNBF (that does not have a DishPro logo), you can have as much as 100 feet of cable between the satellite dish's LNBF connectors and the receiver, so long as you use only RG-6 cable. Also, be sure that any outdoor connections are made using waterproof "F-connectors."

Tighten all the coaxial cable connections *only* by hand. Using a wrench may over-tighten the connections, causing damage. Such damage is *not* covered by the Limited warranty.

1. Once you have the dish mounted by completing all the steps in the section titled *Mounting the Dish*, label two coaxial cables "119" on both ends, and the other two coaxial cables "110" on both ends. These cables need to be long enough to reach from the receiver to the LNBF. If you are installing dual LNBFs and want to support two receivers or multiple dishes (see the *Wiring Diagrams* that begin on page 127)**,** you will also need to thread two additional cables. If you do, make sure you also label one cable "119" on both ends, and the other "110" on both ends.

2. Thread the coaxial cables through the mast (optional) support arm and the Y-bracket. Make sure the cables labeled “119” are threaded through the 119 side and the “110” cables are threaded through the “110” as shown.



Two dual LNBFs and an SW21 multi-dish switch

3. Attach the Y-bracket using the Y-bracket screw. Connect the cables to the LNBFs as shown above. Attach the LNBFs to the Y-bracket using the two LNBF screws.

4. Slide the dish assembly down on the mast. Make sure the pivot bolt rests on the top of the mast. Turn the dish assembly so that it points in the general direction of the satellite, using the azimuth angle from page 102.

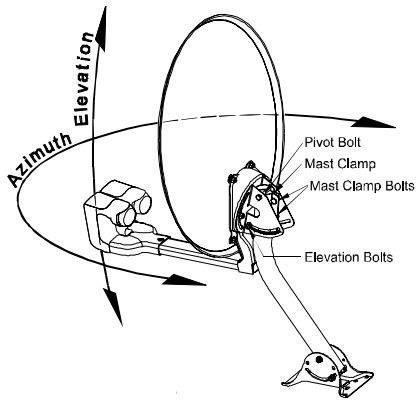
5. Connect the RG-6 coaxial cable from the “119” LNBF *directly* to the **Satellite In 1** connection on the receiver’s back panel. You may temporarily need to use a female-to-female splice in place of where your switch will go later to do this. Do *not* connect the multi-dish switch at this time.

6. Turn On the television and the receiver.The **Point Dish** menu should be displayed. If not, press Menu and select **System Setup** and then **Point Dish** or press Menu-6-2 on the remote. You will see this menu.

7. Make sure the number under **Transponder** is an odd number greater than 10.

8. Make sure the check mark is next to **119 West**. If it is not, move the highlight to **119 West** and press Select on the remote control.

9. Turn the dish back and forth *very slowly,* until the signal strength bar turns *green.* This shows that you have found the signal.



Note: If you cannot find the signal, turn the dish back to the original azimuth setting. Then, loosen both elevation bolts *just enough* to be able to tilt the dish. Tilt the dish up by two degrees, and then tighten both bolts. Now, try turning the dish back and forth again. Repeat these steps, raising and lowering the elevation, until you find the satellite signal.

10. Once you have a signal, turn the dish assembly back and forth very slightly until the signal strength bar displays the strongest possible signal strength. Tighten the mast clamp bolts. Then, loosen the elevation bolts and adjust the elevation of the dish up and down slightly until the signal strength bar displays a strong signal. Do not adjust skew. Tighten all the bolts in the dish assembly so that the dish cannot be moved.

11. Connect the cables as shown in the figure on page 122.

You can use one of the wiring diagrams shown here, or one of the alternate wiring diagrams that begin on page 127.

12. Press Menu and then select System Setup and Point Dish or press Menu-6-2 on the remote to again open the **Point Dish** menu. Select **Switch**. The receiver will check your multi-switch installation. After the system checks the installation, you will see the **Switch Matrix** screen. Make sure that the correct switch is displayed and that you have "Satellite reception verified" from both the **110 West** and **119 West** satellites.

13. At the **Point Dish** menu, select the **110 West** option. Verify that you have a green signal strength bar with a locked signal.

    - If the signal from the **110 West** satellite is weak and you do not see a green signal strength bar, repeat step #8 to fine-tune the dish until you have about the same signal strength for both the **119 West** and **110 West** satellites.

    - If there is no signal strength on **110 West**, check your connections and select **Switch** again. If there is still no signal strength, check to make sure your skew angle is correct, and start over, beginning with step #1 until you have a good signal from both the **110 West** and **119 West** satellites.

14. Select **Done** to exit the **Point Dish** menu.

15. The receiver will begin taking a software upgrade in the background. You will be able to watch TV while this software upgrade is being downloaded from the satellite. However, you will be able to use only the **Browse Banner**, **Program Banner** and Up/Down/Left/Right arrows to find programs to watch during this time (for more information on this, see page 3 under "How to Get Started").

    Note: If you would like to see how the upgrade is progressing, press MENU and Select **System Setup** and then **Software Update** or press MENU-6-7.

    - When this upgrade finishes, your screen will go blank and you will not be able to watch TV for about 10 minutes

16. Connect any other receivers in the system, and then turn them off so they can take the software upgrade. Following this, make sure you run **Check Switch** on all the receivers in the system. When the procedure is finished, you will see a **Switch Matrix** screen similar to the one below.

SWITCH MATRIX
Satellite In : 1 – Status: Satellite reception verified.
Switch Type : SW44
Port 1B 1A 2B 2A
Satellite 119 119 110 110
Transponders ODD EVEN ODD EVEN
Satellite In : 2 – Status: Satellite reception verified.
Switch Type : SW44
Port 1B 1A 2B 2A
Satellite 119 119 110 110
Transponders ODD EVEN ODD EVEN
Check
Done
Help

Note: If you are installing a multi-dish system, follow either these instructions or the instructions for installing a system with a twin LNBF, and then follow the instructions that begin on page 125 to complete your system.

INSTALLING A LEGACY MULTIPLE DISH SYSTEM

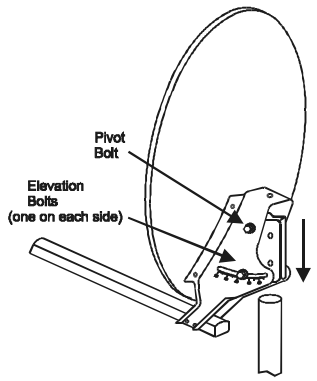
Once you have installed the DISH 500 with its Legacy Dual LNBFs, you can install a DISH 300 with a Legacy Dual LNBF as follows (please see the section titled *Alternate Legacy Wiring Diagrams* on page 127 for more information on wiring the system).

1. Turn on the television and receiver. You should see the **Point Dish** menu**.** If you do not, press Menu and then select **System Setup** and then **Point Dish** or press Menu-6-2 on the remote.
2. On the **Point Dish** menu, use the Up/Down/Left/Right arrow buttons to move the highlight to the Satellite field and choose the satellite at which you would like to aim, for example **61.5**.
3. If there is not a check mark next to the DISH 300 option, move the highlight to it and press Select.
4. Enter your zip code in the **ZIP Code** field
5. The receiver displays the azimuth and elevation angles on the menu. Write down these numbers as you will use them later in this procedure.
6. Using these azimuth, and elevation angles, find a location for the satellite dish. Then, use the elevation angle to find out how high the satellite is in the sky from your location. Make sure nothing blocks the line of sight to the satellites.
7. Mount the satellite dish following the instructions that came with it. Connect the RG-6 cable directly from the LNBF to the **Satellite 1 In** port on the receiver's back panel. Make sure there are no multi-dish switches between the LNBF and the receiver.
8. When the dish is mounted, you should still be on the **Point Dish** menu. If not, press Menu on the remote and select **System Setup** and then **Point Dish**, or press Menu-6-2 on the remote.
9. Make sure there is a check mark next to **Sat Input 1**.
10. Look at the Signal Strength bar. Turn the dish back and forth *very slowly*, until the signal strength bar turns *green*. This shows that you have found the signal.

Azimuth: _____

Elevation: _____

Note: If you cannot find the signal, turn the dish back to the original azimuth setting. Then, loosen both elevation bolts *just enough* to be able to tilt the dish.



Tilt the dish up by two degrees, and then tighten both bolts. Now, try turning the dish back and forth again. Repeat these steps, raising and lowering the elevation, until you find the satellite signal.

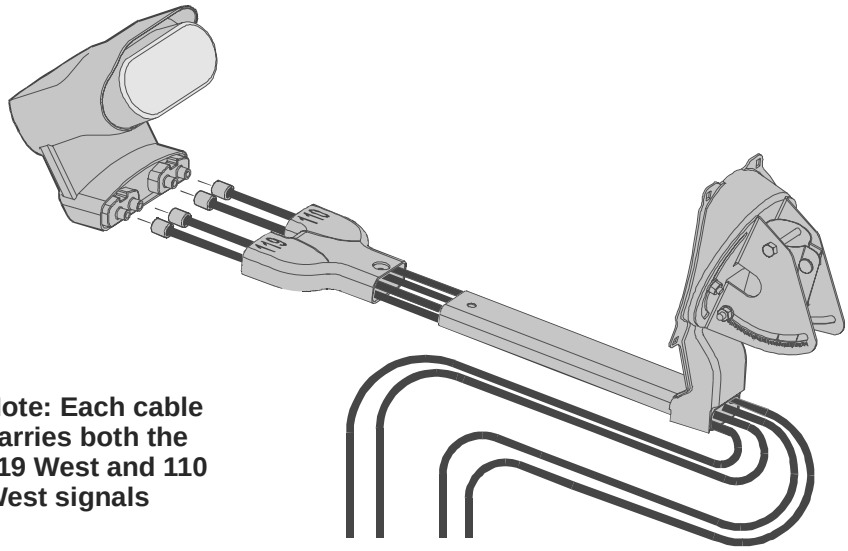
11. Once you have a signal, turn the dish assembly back and forth very slightly until the signal strength bar displays the strongest possible signal strength. Tighten the mast clamp bolts. Then, loosen the elevation bolts and adjust the elevation of the dish up and down slightly until the signal strength bar displays a strong signal. Tighten all the bolts in the dish assembly so that the dish cannot be moved.
12. Mark the final locations on the mast and mounting bracket with a permanent marker. This assists you later if you have to realign the dish because of movement due to wind or weather. Do not scratch the painted surfaces to mark them. This will cause rusting.
13. Connect the LNBFs to the switch(es). (See the Alternate Wiring diagrams on page 127 for more information.)
14. Connect the switch(es) to both **Satellite In** ports on the receiver.
15. Run **Check Switch** from the **Point Dish** menu. Verify that the correct switches have been identified and that you have "Satellite reception verified" for all the satellites in your system for both the **Satellite In 1** and **Satellite In 2** tuners.

DISH 500, ONE QUAD LNBF, UP TO FOUR RECEIVER TUNERS

WARNING! This diagram omits grounding for clarity. Make sure to ground the system per the *National Electrical Code* (NEC) and all local electrical codes.

Note: A DISH Network satellite receiver can have either one or two tuners, depending on the model.

DISH 500
110 West and 119 West



Note: Each cable carries both the 119 West and 110 West signals

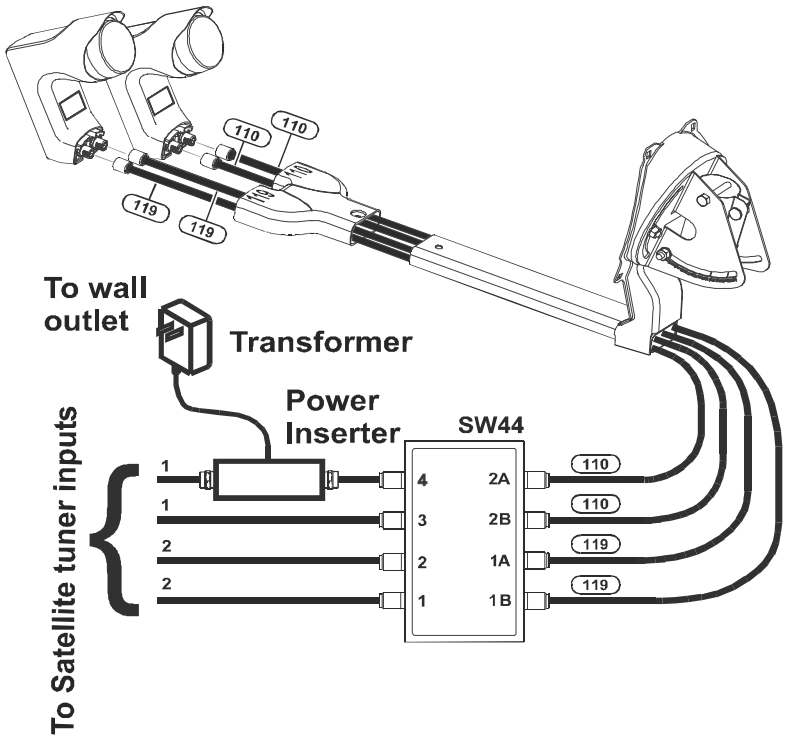
To Satellite Tuner Inputs

DISH 500, TWO DUAL-OUTPUT LNBFS AND ONE SW44 MULTI-DISH SWITCH, UP TO FOUR TUNERS

WARNING!

This diagram omits grounding for clarity. Make sure to ground the system per the *National Electrical Code* (NEC) and all local electrical codes.

Note: A DISH Network satellite receiver can have either one or two tuners, depending on the model.



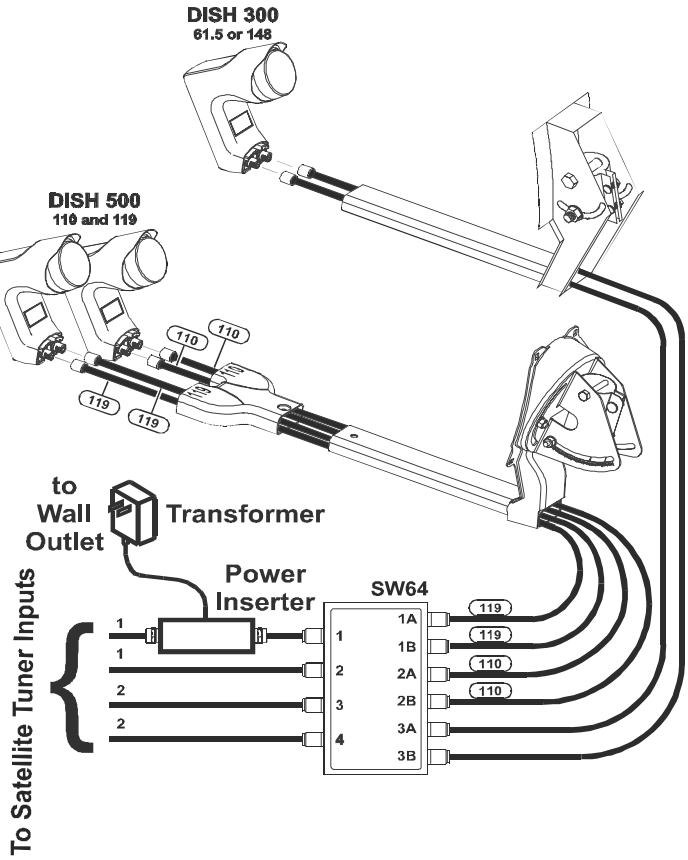
Note: The DishPVR 721 can *only* be connected to input pair 1 or input pair 2. DO NOT combine types of input to the DishPVR 721.

TWO DISHES, THREE DUAL-OUTPUT LNBFS, ONE SW64 MULTI-DISH SWITCH, UP TO FOUR RECEIVER TUNERS

This diagram omits grounding for clarity. Make sure to ground the system per the *National Electrical Code* (NEC) and all local electrical codes.

WARNING!

Note: A DISH Network satellite receiver can have either one or two tuners, depending on the model.



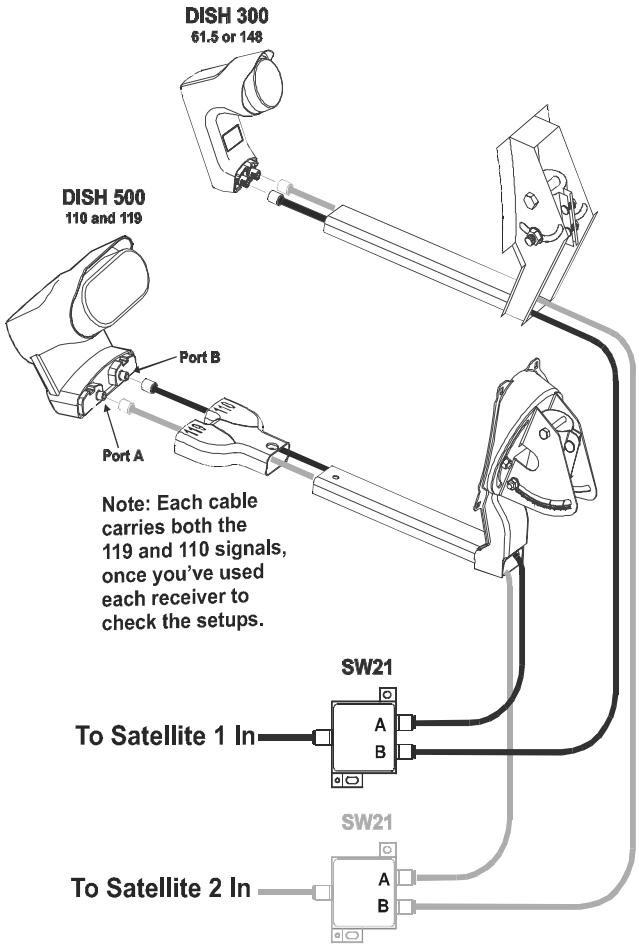
Note: The DishPVR 721 can *only* be connected to input pair 1 or input pair 2. DO NOT combine types of input to the DishPVR 721.

TWO DISHES, ONE DUAL LNBF, ONE SINGLE LNBF, TWO SW21 MULTI-DISH SWITCHES, TWO RECEIVER TUNERS

This diagram omits grounding for clarity. Make sure to ground the system per the *National Electrical Code* (NEC) and all local electrical codes.

WARNING!

Note: A DISH Network satellite receiver can have either one or two tuners, depending on the model.



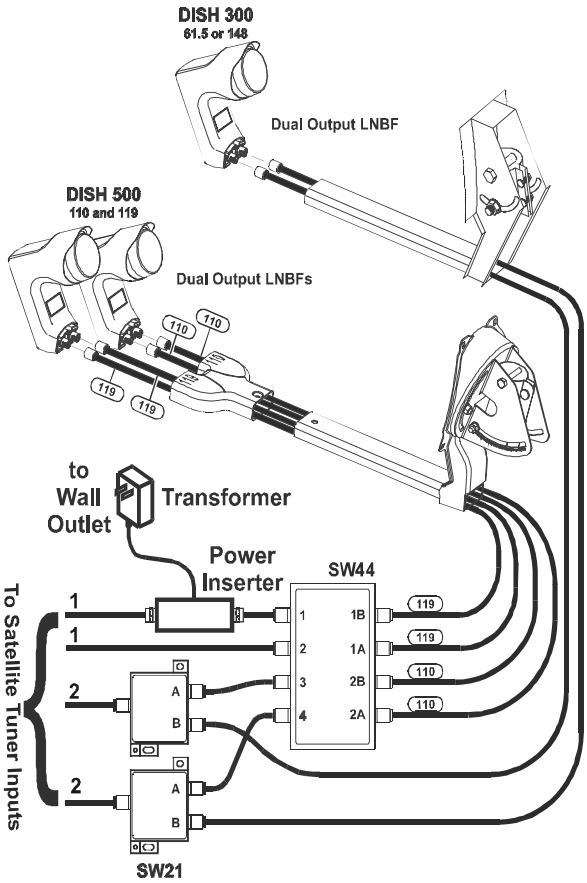
Note: The **A** posts on both SW21s must be connected to the Dish 500 LNB and the **B** posts must be connected to the Dish 300 LNB.

TWO DISHES, THREE DUAL-OUTPUT LNBFS, ONE SW44 SWITCH, TWO SW21 SWITCHES, UP TO FOUR RECEIVER TUNERS

WARNING!

This diagram omits grounding for clarity. Make sure to ground the system per the *National Electrical Code* (NEC) and all local electrical codes.

Note: A DISH Network satellite receiver can have either one or two tuners, depending on the model.



Note: In this installation, only two receivers will get signal from all three LNBFs. The other two receivers will get signal from only two LNBFs.

WARNING!

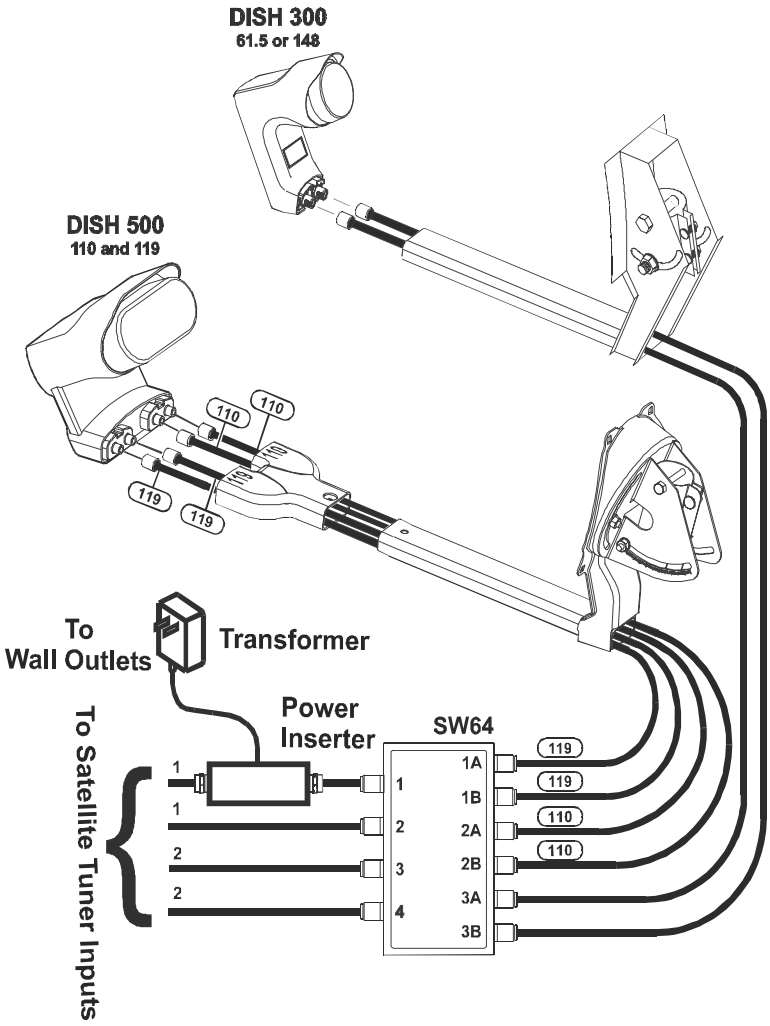
If you install a power inserter and an SW21 switch on the same cable, you must install the SW21 switch between the receiver and power inserter, otherwise you could damage the SW21 switch.

Note: The DishPVR 721 can *only* be connected to input pair 1 or input pair 2. DO NOT combine types of input to the DishPVR 721.

TWO DISHES,ONE QUAD LNBF, ONE DUAL-OUTPUT LNBF, ONE SW64 MULTI-DISH SWITCH, UP TO TWO TUNERS

WARNING! This diagram omits grounding for clarity. Make sure to ground the system per the *National Electrical Code* (NEC) and all local electrical codes.

Note: A DISH Network satellite receiver can have either one or two tuners, depending on the model.



Note: The DishPVR 721 can *only* be connected to input pair 1 or input pair 2. DO NOT combine types of input to the DishPVR 721.

CONNECTING EACH RECEIVER TO A TELEPHONE LINE

You *must* keep each receiver connected to an active telephone line. Otherwise, you may not be able to order pay per view programs. Run a telephone cable with a standard RJ-11 connector from each receiver's back panel **Phone Jack** to an active telephone connection.

Note: You *may* be able to use a wireless telephone extender. However, this may *not* support all the features of some receivers.

You *must* also set up each receiver for your telephone system (touchtone or rotary/pulse), and set a telephone number prefix, if you need a prefix to make an outside call.

1. Display the **System Setup** menu.
2. Select the **Telephone** option to display the **Telephone System Setup** menu.
3. Select the **Touch Tone** or the **Rotary/Pulse** option in the **Phone Type** list.

   Note: Usually, you need a telephone number prefix only for business installations. For most residential installations, all you need to do is set the telephone system type. The default setting of **No Prefix needed** will allow correct dialing. If this is the case, select the **Done** option to save the above setting, and stop here. If you do need to set a prefix, then instead of selecting the **Save** option, go on to step 4.
4. Move the highlight to the **Prefix Code Select** option in the **Outside Line Prefix** list.Press the **Select** button to select the highlighted option.
5. Move to number of digits, enter the number of digits for your prefix, move down and enter the prefix in the boxes provided.
6. Select **Done**.

Notes

Chapter 6

Reference

WHAT YOU WILL FIND IN THIS CHAPTER:

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Troubleshooting Problems with DishPro Twin LNBF	page 139
Troubleshooting Problems with the Remote Control	page 139
Troubleshooting Problems with Hearing and Watching Programs	page 141
Troubleshooting Problems with the Program Guide and Browse Banner, and Using the Menus	page 143
Troubleshooting Problems Changing Channels	page 143
Troubleshooting Problems with Favorites Lists	page 144
Troubleshooting Problems with Locks	page 144
Troubleshooting Problems using the Telephone for Voice/Data/Fax	page 145
Troubleshooting Problems Buying Pay Per View Programs	page 145
Troubleshooting Problems with Caller ID	page 146
Troubleshooting Problems with Event Timers	page 146
Remote Control Device Codes	page 148

Chapter 6

Reference

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TROUBLESHOOTING TABLES

Use these tables if you have problems using the system. Look in this section for a description of the problem *before* calling the Customer Service Center. Many problems arise from basic misunderstandings of how the system works, especially when you are just becoming familiar with it. These tables cover many problems, usually with a simple solution for each one. To solve a particular problem, do the following:

1. Review the section in this *Guide* that relates to the problem.
2. If you cannot find a solution, then find the section in the following tables that relates to the problem. Look down the *What Is Happening* column until you find the problem.
3. For better understanding, read the information in the *Possible Reason* column.
4. Try each of the suggested solutions in the *What to Do* column.
5. For more information, call the Customer Service Center at 1-800-333-DISH (3474), or see *www.dishnetwork.com*.

Note: Before calling the Customer Service Center, have ready the date of purchase and either your customer account number, the receiver conditional access number, or the receiver model number. Display the *Important System Information* screen to find these numbers (See *Ordering your Programming* on page 4). Also, write down any error messages that the receiver displays on the television screen.

Troubleshooting by Message Number

Message Number	Possible Reason	What to Do
001	There may be a problem with the multi-dish switch.	Check the coaxial cables and their connections to and from the multi-dish switch. Make sure that all required cables are in place, and check that all cable connections are tight and dry (for outdoor cables). Run **Check Switch** (see page 3). If this does not work, call the Customer Service Center at 1-800-333-DISH (3474) for help.
002	Heavy rain, snow, or cloud cover may be interfering with transmission of the satellite signal, or there may be other interference.	Note the local weather conditions. Remove any snow or other debris which may have collected on the satellite dish. Make sure that the satellite dish has a clear line of sight to the satellite. Check whether branches or leaves have grown into the line of sight. Make sure that the satellite dish is aimed at the satellite. Check the strength of the signal using the **Point Dish** menu. Consult your installer to re-aim the dish, if necessary, to obtain the strongest possible signal.
003, 004	The wrong type of coaxial cable may be used in the system, or the cable run length may be too long. Or, there may be a problem with the multi-dish switch.	Make sure the system uses RG6 coaxial cable; if not, call your dealer or installer. Check the dish-to-receiver cable run length. If your entire system is DishPro, it can be as much as 200 feet. If it is a Legacy system, it should not be more than 100 feet. Check the coaxial cables and their connections to and from the multi-dish switch. Make sure that all required cables are in place, and check that all cable connections are tight and dry (for outdoor cables). If this does not work, do the **Check Switch** test (see page 3).
005	The receiver may not yet have been electronically linked with the Smart Card, via the satellite signal. The satellite dish may have moved so that it is no longer picking up the satellite signal. The cable connections may have loosened or have moisture inside. There may be an interruption of the satellite signal.	If you have authorized the receiver, wait a few minutes to see if the message is removed. Make sure that all required cables are in place, and check that all cable connections are tight and dry (for outdoor cables). Make sure that the satellite dish has a clear line of sight to the satellite. Check whether branches or leaves have grown into the line of sight. Check that the **Signal Strength** bar in the **Point Dish** menu is green and displays the word **Locked**. If not, contact your installer to re-aim the satellite dish. If you have not authorized the receiver, call the Customer Service Center at 1-800-333-DISH (34740 for help.
006	The receiver may not be connected to an active telephone line. The Smart Card credit limit may have been suspended.	You *must* connect the receiver to an active telephone connection at all times. If you install two or more receivers, you *must* connect *each* receiver to an active telephone connection at *all* times. Review your pay per view purchases to check the Smart Card credit limit.
011, 012	Viewers in specific areas are prohibited from watching certain programs. *For example*, viewers who live close to a particular football stadium may be prohibited from watching football games that are played in that stadium.	Remember that the program providers specify which programs are "blacked out" for which viewers, *not* DISH Network℠.
013, 014	You may have tried to tune to a program on a channel which you have not bought.	You *must* buy a channel *before* you can tune to a program on that channel. Call the Customer Service Center at 1-800-333-DISH (3474) to buy the channel, or if you believe this message was displayed by mistake.

Troubleshooting by Message Number

Message Number	Possible Reason	What to Do
015	You may have just plugged in the receiver, and it is acquiring the satellite signal. Or, the receiver may have temporarily lost the signal.	Wait a few minutes to see if the message is removed. Make sure that all required cables are in place, and check that all cable connections are tight and dry (for outdoor cables). Make sure that the satellite dish has a clear line of sight to the satellite. Check whether branches or leaves have grown into the line of sight. Check that the **Signal Strength** bar in the **Point Dish** menu is green and displays the word **Locked**. If not, contact your installer to re-aim the satellite dish.
018	The receiver may not be connected to an active telephone line. The Smart Card credit limit may have been exceeded.	You *must* connect the receiver to an active telephone connection at all times. If you install two or more receivers, you *must* connect *each* receiver to an active telephone connection at *all* times. Review your pay per view purchases to check the Smart Card credit limit. Call the Customer Service Center at 1-800-333-DISH (3474) for help checking the credit limit and/or to get authorization to make a purchase.
019	The Smart Card may be inserted up side down or backwards.	Check that the Smart Card is inserted right side up, with the picture on top and the arrow facing into the receiver front panel slot.
020	The receiver will work *only* with the Smart Card that was inserted in the receiver when the Customer Service Center authorized the receiver.	Insert the proper Smart Card into the receiver front panel slot. Call the Customer Service Center at 1-800-333-DISH (3474) for help.
021	The Smart Card may be missing or may not be inserted correctly.	Check that the Smart Card is fully inserted into the receiver front panel slot.
022	The receiver may not yet have been electronically linked with the Smart Card, via the satellite signal. The satellite dish may have moved so that it is no longer picking up the satellite signal. The cable connections may have loosened or have moisture inside. There may be an interruption of the satellite signal.	If you have authorized the receiver, wait a few minutes to see if the message is removed. Make sure that all required cables are in place, and check that all cable connections are tight and dry (for outdoor cables). Make sure that the satellite dish has a clear line of sight to the satellite. Check whether branches or leaves have grown into the line of sight. Check that the **Signal Strength** bar in the **Point Dish** menu is green and displays the word **Locked**. If not, contact your installer to re-aim the satellite dish. If you have not authorized the receiver, call the Customer Service Center at 1-800-333-DISH (3474) for help.
026	The receiver may have temporarily lost the satellite signal.	Wait a few minutes to see if the message is removed. Make sure that all required cables are in place, and check that all cable connections are tight and dry (for outdoor cables). Make sure that the satellite dish has a clear line of sight to the satellite. Check whether branches or leaves have grown into the line of sight. Check that the **Signal Strength** bar in the **Point Dish** menu is green and displays the word **Locked**. If not, contact your installer to re-aim the satellite dish.
028	The receiver may need to get new software before you can use it to order pay per view programs.	Turn the receiver off. Doing this allows the receiver to "download" new software via the satellite signal. The download may take several minutes; do *not* disturb or unplug the receiver during this time. When the download is done, you will be able to use it to order pay per view programs.
032	You may have tried to set a *VCR Event Timer* without having set up the receiver to control the VCR.	You *must* set up the receiver to control the VCR *before* you can set a *VCR Event Timer*. See the *User Guide* for instructions.
059	You may have tried to close an installation menu without having done the **Check Switch** test.	If your setup includes a multi-dish switch, you *must* do the **Check Switch** test (see page 3).

Troubleshooting by Message Number

Message Number	Possible Reason	What to Do
060	You may have aimed the satellite dish at one satellite, but selected the option for another satellite on the **Point Dish** menu.	Make sure that you have selected the option for the right satellite on the **Point Dish** menu. Make sure that the cable(s) for the satellite you have selected are connected to the LNBF that receives signals from that satellite. Re-aim the satellite dish at the right satellite.
061	You may have set up the receiver to accept a transmission (a "download") of the latest operating software via the satellite signal.	It is *very* important for the receiver to get the latest operating software, so let the receiver do so. The "download" may take several minutes. Do *not* disturb or unplug the receiver during this time.
074	The receiver gives you three chances to enter the correct password. If you fail to do so, the receiver "times out" and will not allow you to try again for several minutes.	Wait a few minutes and then try again to enter the password. **Note:** The "time out" feature is designed to prevent someone from trying password after password until he or she happens to guess the right one and so gains unauthorized access to the receiver.
078, 079, 080	You may not have connected the receiver to an active telephone line, or the telephone line may be defective.	Connect the receiver to an active telephone line. Make sure that the telephone line to which you connect the receiver is working properly. **Note:** To be able to order pay per view programs, you *must* keep the receiver connected to an active telephone line at all times. If your setup includes more than one receiver, this applies to *each* receiver. The receiver uses the telephone line to make toll-free calls, usually in the middle of the night, to send information to the Customer Service Center at 1-800-333-DISH (3474).
093	You may have set up the receiver to reset itself back to the "factory defaults," *that is*, the settings it had when it was shipped from the factory.	If you want to reset the receiver to its factory default settings, select the **Yes** option. If not, select the **No** option.

Troubleshooting Problems with DishPro Twin LNBF

What's Happening	What's Wrong	What You Can Do
When you run Check Switch, you do not see "Twin" identified as a Device or LNB. All entries show "X"s.	• The DishPro Twin LNBF may not be properly connected. • Cables may be too long, over 200 feet. • Cables may not be rated for 2150 MHz. • You may have DishPro Adapter installed on a DishPro receiver. • May have a non-DishPro switch or LNB or incompatible accessory device* in the system.	• Check all cable connections in your system and run Check Switch again. • Make sure cable length between receiver and DishPro Twin does not exceed 200 feet. Rerun check switch. • Make sure cable is rated for 2150 MHz. Rerun check switch. • Remove the DishPro Adapter; this device is only for non-DishPro receivers. Rerun check switch. • Remove any non-DishPro switches/LNBs or incompatible accessory devices* from the system. All LNBs and switches must be DishPro. Rerun check switch.
When you run Check Switch, you see "Twin" identified as the Device/ LNB and Satellite shows "Conn" but you do not see "Satellite Reception Verified".	• The DishPro Twin LNBF is connected but no satellite signal is present.	• Check the point dish/signal screen to confirm you have satellite signal. If not, check your dish antenna to ensure the DishPro Twin is installed properly, the dish is pointed/peaked on the satellite signal and there is nothing blocking the signal path to the dish. Rerun check switch.

Troubleshooting Problems with DishPro Twin LNBF

What's Happening	What's Wrong	What You Can Do
When you run Check Switch, you see "Satellite Reception Verified" but you see "Feed" instead of "Twin" identified as the Device/LNB.	• The DishPro Twin is connected but something in the system may be blocking the switch commands.	• Check the cable path between the DishPro Twin and the receiver and remove any incompatible accessory devices*. Rerun check switch.
When you run Check Switch, you do not see "Twin" identified as a Device or LNB, but odd transponders are detected only on one satellite.	• Your box may need a software upgrade. • You may have DishPro Adapter installed on a DishPro receiver. • May have a non-DishPro switch or LNB in the system	• From point dish/signal screen, select 119 west satellite and an odd transponder greater than 10 (e.g., 11). Confirm satellite signal is present. Turn the receiver off and wait 30 minutes. Rerun check switch. • Remove the DishPro Adapter; this device is only for non-DishPro receivers. Rerun check switch. • Remove any non-DishPro switches/LNBs from the system. All LNBs and switches must be DishPro. Rerun check switch.
When you run Check Switch, you see "Twin" identified as the Device/ LNB but you only have signal confirmed from one satellite.	• The DishPro Twin LNBF is connected but the dish may not be pointed to receive signal from both 110 and 119 satellites.	• If the check switch summary screen shows "119 W" on Dish Input 2, you need to point your dish 9 degrees to the east and repeak your dish. Rerun check switch. If the check switch summary screen shows "110 W" on Dish Input 1, you need to point your dish 9 degrees to the west and re-peak your dish. Rerun check switch. Make sure skew setting is correct for a Dish 500 installation at your zip code. Rerun check switch.
When you run Check Switch, you see "Twin" identified as a Device or LNB, but only odd transponders are detected.	• Cables may not be rated for 2150 MHz.	• Make sure cable is rated for 2150 MHz and all accessory devices are compatible. Rerun check switch.
Getting receiver messages that signal is lost or being acquired	• Check the weather conditions to see if heavy rain or snow could be temporarily block the signal. • Check for any obstructions in way of the dish like new growth on trees	• Wait for weather to clear up and restore signal. • Clear obstructions from the signal path.

* Compatible accessory devices must pass 2150 MHz signals, 22 KHz signals both directions (per DiSEqC 2.0 specifications), and pass DC power.

Troubleshooting Problems with the Remote Control

What Is Happening	Possible Reason	What to Do
You cannot find the remote control.		Use the receiver front panel **Control Buttons** to control the receiver until you find the remote. If the remote control is permanently lost or too damaged to use, call the Customer Service Center at 1-800-333-DISH (3474) to order a replacement.
When you press a button on the remote control, the receiver does not do what you expect.	• The remote control may be missing batteries, the batteries may be incorrectly placed in the remote, or the batteries may be weak or dead. • The remote control address may be incorrect.	• If the batteries are missing or dead, insert fresh AAA-size batteries. If the remote has fresh batteries, check whether they were placed according to the label diagram. If not, remove them and place them correctly. • Check the remote control address.
When you press the remote control **Power** button to turn the receiver ON, the receiver front panel Power light does not light up.	• You may not be able to see that the receiver Power light is on, if other lights in the room are too bright. The remote control may not be operating properly or the batteries may be weak or dead. • The receiver power cord may not be plugged into a power outlet, or there may be a problem with the power. • The remote control's address may be incorrect.	• Try other remote control buttons to see if the receiver is responding. Replace the remote control batteries with fresh ones. • Check that the receiver power cord is not damaged, and that the plug is inserted correctly into the outlet. Try to turn on the receiver with the front panel **Power** button. • Check the remote control address.
You use a pyramid type IR extender (not a "mouse tail"), and it does not seem to work.	• The IR sensor on the extender that receives the remote control signals may not be facing the remote control. • The IR cable on the extender that sends the signal to the receiver may not be right in front of the IR sensor on the receiver front panel.	• Make sure the extender that receives the signal from the remote control is facing the right way, so that the IR sensor can receive the remote control signals. • Make sure that the IR cable on the extender that sends the signal to the receiver is right in front of the IR sensor on the receiver front panel, so that the receiver IR sensor can receive the signals. If doing the above does not solve the problem, contact the manufacturer of the extenders for assistance.
You are programming the remote and the receiver "times out" and goes back to showing the program you were watching.	• If you do not press any button for 20 seconds, the receiver "times out," and goes back to showing the program you were watching. • If you hold down a button for a long period of time (two minutes or more), the receiver "times out," and goes back to showing the program you were watching.	Start over.

Troubleshooting Problems Hearing A Program

What Is Happening	Possible Reason	What to Do
The receiver front panel Power light is on and there is a good picture on the TV set, but you do not hear any sound.	You may have muted the sound, or set the volume so low that you cannot hear it. The audio connections may not be properly connected.	Check the volume level on the TV or audio device. Turn off the mute or turn up the volume, as required. Check the audio connectors and cables from the receiver to the TV or the sound system. Check the TV speakers or the sound system.
You hear a foreign language with a program.	You may have set the receiver to select an alternate audio language. The program may be in a foreign language.	Use the **Alternate Audio Language** menu to select the language that you prefer.

Troubleshooting Problems Watching A Program

What Is Happening	Possible Reason	What to Do
The receiver front panel Power light is on, but the TV image: is black (no picture), is frozen, has break-ups, has "snow," or shows small squares of various colors.	The TV set may not be working properly. If the TV and the receiver are working properly, there may be interference with the satellite signal. The TV may be wired to the wrong input.	Make sure that the TV set is plugged into an electrical outlet. Make sure the outlet has electrical power. Make sure that the TV is turned on. If the receiver is connected to the TV using only the RF or VHF connections, make sure that the TV is tuned to channel 3 or 4 (whichever works best in your area) and that the receiver back panel **Channel 3/4 Switch** is set to the same channel as the TV. Make sure that the TV brightness and contrast are adjusted correctly. Make sure that the TV is connected properly to the receiver. Make sure that the TV's text mode and closed captioned features are turned off. Set the TV to SVIDEO or VIDEO input. Check that the system has been installed correctly. Make sure that all required coaxial cables are in place, and check that all cable connectors are tight and dry (for outdoor cables). Make sure that the satellite dish has a clear line of sight to the satellite. Check whether branches or leaves have grown into the line of sight. Make sure that the satellite dish is aimed at the satellite. Check the strength of the signal using the **Point Dish and Signal Strength** menu. Consult your installer to re-aim the dish, if necessary, to obtain the maximum possible signal strength. Note the local weather conditions. Heavy rain, snow, or cloud cover may be interfering with transmission of the satellite signal. Remove any snow or other debris which may have collected on the satellite dish.
The receiver front panel Power light is on, and there is a picture on the TV screen, but the picture: has sparkles or is grainy, has a herringbone pattern, lacks color or vertical hold, or wobbles, or looks "washed out" or fuzzy.	The TV set may not be working properly. If the receiver is connected to the TV using only the RF or VHF connections, there may be a strong local broadcast on the same channel, or a channel adjacent to the one to which the TV is tuned. There may be interference from other nearby electrical devices (such as radio towers, cellular telephones, computers, microwave ovens, radios, stereos, or TVs).	Make sure that the TV brightness and contrast are adjusted correctly, and that the TV is working properly. Make sure that the TV is connected properly to the receiver. Check other nearby electrical devices as possible sources of interference. Check that all required coaxial cables are in place. Check for moisture or water leaking into all connections. Dry them out if needed, then seal them with coaxial cable sealant. Check the dish-to-receiver cable run length; if it is over 100 feet, call your dealer or installer. Make sure the system is properly grounded.
A "black box" fills almost all of the TV screen.	You may have turned on the Closed Captioned feature on the TV, and put that feature into Text mode.	Using the TV remote control and/or menus displayed by the TV (*not* the receiver remote control or the menus displayed by the receiver), turn off the closed captioned feature.
The TV screen is all blue.	You may have connected the receiver to an input on the TV that is incorrect for the signal output from the receiver.	Check your TV owner's manual for the correct TV input to use for the signal output from the receiver.

Troubleshooting Problems Using the Menus

What Is Happening	Possible Reason	What to Do
You were using a menu, and it suddenly closed.	The receiver has a time-out feature that closes any menu after several minutes of no activity. This will discard any changes you have made, but otherwise does no harm to the receiver.	Start over again.

Troubleshooting Problems Using the Program Guide or the Browse Banner

What Is Happening	Possible Reason	What to Do
In the **Program Guide**, some channels have a red background.	Red means that you have not subscribed to that channel. You *must* subscribe to a channel before you can tune the receiver to it.	If you want to buy a channel, call the Customer Service Center at 1-800-333-DISH (3474).
You try to display future programs in the **Program Guide** or **Browse Banner**, but find you cannot.	The **Program Guide** and **Browse Banner** can display programs scheduled for an extended, but not unlimited time beyond the present.	Try displaying the **Program Guide** again later. By that time, it may show programs for the time and date you want.
You try to display programs that have ended in the **Program Guide** or **Browse Banner**, but find you cannot.	The **Program Guide** and **Browse Banner** can display *only* programs that have not yet ended. These features *cannot* display a time earlier than the present.	Contact the program providers (for example, the channel or network affiliate that broadcast the program) for details on past programs.
The **Program Guide** is in the wrong order.	The **Program Guide** is set incorrectly.	Press the Menu button on your remote control, select **Preferences**, select **View Preferences**, and then set your **Program Guide** in the order you wish to view the channels.
When you are using the **Program Guide** or **Browse Banner**, some channels are missing.	You may have applied a Favorites List other than the list named **All Chan**. You may have set up the **Program Guide** so that when the receiver is locked, the **Guide** hides adult channels. If your setup includes a multi-dish switch, you may need to do the **Check Switch** procedure.	You can change the applied Favorites List while using the **Program Guide** by pressing the remote control **Guide** button. You can choose another custom Favorites List, the **All Chan** list, which includes all the channels, or the **All Sub** list, which includes all subscribed channels. Unlock the receiver for the **Program Guide** to display adult channels.

Troubleshooting Problems Changing Channels

What Is Happening	Possible Reason	What to Do
You enter a desired channel number. The channel changes, but the new channel is not exactly the channel you entered. You are scanning up or down through the channels, and the receiver is skipping channels that you know you have subscribed to.	You may have made a mistake entering the channel number, or the channel number you entered may be invalid. If so, the channel displayed is the closest possible to the channel you entered. If you entered the number for a channel that you have not subscribed to, the receiver will change to the channel and display a message suggesting that you might want to subscribe to the channel. If a Favorites List other than **All Chan** is applied, the receiver will skip channels that are not on the applied list. If you have set up the **Program Guide** to hide adult channels and the receiver is locked, the receiver will skip such channels.	Carefully try entering again the channel number you want. Select **All Chan** as the active Favorites List. Unlock the receiver so that it does not skip adult channels. If you want to buy a channel, call the Customer Service Center at 1-800-333-DISH (3474).

Troubleshooting Problems Using Favorites Lists

What Is Happening	Possible Reason	What to Do
You press the remote **Guide** button while the **Program Guide** is displayed. You find that you can apply *only* the **All Chan** list or the **All Sub** list.	If you have not added channels to any custom Favorites List, you will be able to apply *only* the **All Chan** list or the **All Sub** list.	You *must* add channels to a custom Favorites List *before* you can apply it.
You try to change the **All Chan** list or the **All Sub** list. The receiver displays an **ERROR** message.	The receiver will *not* allow you to change the **All Chan** list or the **All Sub** list.	Choose another list to change. **Note:** You *can* change the **All Sub** list by changing what channels you buy.
You try to apply an empty Favorites List. The receiver displays an **ERROR** message.	The receiver will not allow you to apply an empty list.	Choose another list to apply, or add at least one channel to the empty list.
A Favorites List does not show channels that you know you have added to it.	If you have set up the **Program Guide** to hide adult channels and the receiver is locked, the Favorites List will not show such channels.	Unlock the receiver for the list to show adult channels.

Troubleshooting Problems Using Locks

What Is Happening	Possible Reason	What to Do
You set a lock (*for example*, a lock on programs by ratings), but the lock does not take effect.	You may not have locked the receiver.	You *must* lock the receiver to apply any lock that you have set (see page 66).
You forgot the password, so that you are unable to unlock the receiver.	You may not have written down the password, to keep it in a safe place.	Call the Customer Service Center at 1-800-333-DISH (3474. You *must* provide the following information: (1) your name; (2) your address; (3) your telephone number;(4) the receiver serial identification number; and (5) your Personal Identification Number (PIN), if you use one.

Troubleshooting Problems Buying a Pay Per View Program

What Is Happening	Possible Reason	What to Do
Someone orders a pay per view program without your permission.	You may have been away from the receiver, and someone else used it.	Lock the purchase of pay per view programs. *Remember that you are responsible for all pay per view purchases, whether or not you authorize such purchases.* If you lock pay per view purchases, then anyone who wants to order a pay per view program *must* enter the password.
You find that you are not able to order a pay per view program.	The receiver may not be connected to an active telephone line. The Smart Card credit limit may have been exceeded.	You *must* connect the receiver to an active telephone connection at all times. If you install two or more receivers, you *must* connect *each* receiver to an active telephone connection at *all* times. Review your pay per view purchases to check the Smart Card credit limit.
You find that you are not able to cancel a pay per view program.	You ordered a pay per view program, and then decided not to watch it.	You *cannot* cancel an order for a pay per view program, whether it was just ordered or ordered earlier.
Your setup includes more than one receiver. You order a pay per view program, but it does not appear via all of the receivers.	You ordered a pay per view program, and want it to be available via all the receivers in your setup.	If you want to watch a pay per view program on TVs connected to up to six receivers, you must *order* the program for *each* receiver but you only *pay* for the program *once*.

Troubleshooting Problems Using the Telephone for Voice/Data/FAX

What Is Happening	Possible Reason	What to Do
While you are making a telephone call, you hear "clicks."	The receiver may have tried to call the Customer Service Center to send pay per view purchase information. When the receiver found that the telephone was busy, it automatically disconnected.	You do not have to do anything. You can always use your telephone line, because the receiver automatically hangs up if it finds the line is busy.
You pick up the telephone to make a call, but you do not hear a dial tone.	The receiver was calling the Customer Service Center to send pay per view information. When the receiver found that the telephone was busy, it automatically disconnected.	Hang up, and then pick up the telephone again to get a dial tone.
Your computer or facsimile (FAX) machine tries to send a FAX or modem transmission, but fails.	The receiver was calling the Customer Service Center to send pay per view information. When the receiver found that the telephone was busy, it automatically disconnected. The FAX or modem found that there was no dial tone, and cancelled the transmission.	Resend the FAX or modem transmission.
Your computer or FAX machine was receiving a FAX or modem transmission, but an error occurred.	The receiver may have tried to call the Customer Service Center to send pay per view purchase information during the FAX or modem call. When the receiver found that the telephone was busy, it automatically disconnected. This generated "clicks" that caused an error in the FAX or modem transmission.	Have the sender resend the FAX or modem transmission.

Troubleshooting Problems with Caller ID

What Is Happening	Possible Reason	What to Do
Caller ID is not working.	You do not have Caller ID service from your local phone company.	Verify that Caller ID is a service provided by your local phone company.
Caller ID is not working.	Your phone line is not connected to the phone jack on the back of the receiver.	Verify that you have connected the phone line to the phone jack on the back of the receiver.
Caller ID is not working.	You do not have the Caller ID option enabled.	Verify that you have enabled the Caller ID option on the **View Preferences** screen.

Troubleshooting Problems Using Event Timers

What Is Happening	Possible Reason	What to Do
You try to set up an event timer and the receiver displays a message noting that the program is locked.	You *must* enter the password *before* you can create an event timer for a locked program.	To be able to set up an event timer for the program, first enter the password.
You try to set up an event timer and the receiver displays a message noting that the program is a pay per view event.	You *must* order a pay per view event *before* you can create an event timer for it.	To be able to set up an event timer for the event, first order it.
You try to set up an event timer, but the receiver displays an **Error** message giving you the option to delete an event timer that was set up earlier.	You already have set up the maximum number of event timers.	To be able to set up a new event timer, delete one of the event timers you set up earlier.
You set up an event timer, but the receiver does not tune to the channel of the program, or does not record the program.	You may have set up a *Reminder Event Timer* but what you should have set up is an *Auto-Tune Event Timer*, a *VCR Event Timer*, or a *PVR Event Timer*.	Remember that a *Reminder Event Timer* just reminds you that the program is about to start. An *Auto-Tune Event Timer* reminds you and tunes the receiver to the program. A *VCR Event Timer* reminds you, tunes the receiver, and starts the VCR recording. A *PVR Event Timer* reminds you, tunes the receiver, and starts the hard disk. A *PVR Event Timer* can operate *only* if the receiver memory has enough space.
You set up an event timer for a program that is repeated (such as a regularly scheduled program), but the timer does not operate for a showing of the program.	You may have set up a timer with an incorrect frequency.	Remember that a *Once* event timer operates just one time. A *Mon.-Fri.* event timer operates Monday through Friday on the same channel at the same time. A *Daily* event timer does the same, Monday through Sunday. A *Weekly* event timer operates once a week on the same channel at the same time.
You set up an event timer, but the timer does not operate at all.	The program time may have changed so that the event timer overlapped another event timer. The program time may have changed by more than twenty-four hours.	If the receiver is ON and finds an event timer overlap, it will display the **Event Timer Scheduling Conflict** menu. You *must* edit or delete one of the overlapping event timers. No event timer will operate if the program time changes by more than twenty-four hours.
You set up a *Once* event timer, but the timer operates at a time different from what you expect.	The program time changed.	A *Once* event timer always operates at the actual time of the program.

Troubleshooting Problems Using Event Timers

What Is Happening	Possible Reason	What to Do
You stop the operation of an event timer for one showing of a program that is repeated (such as a regularly scheduled program), but the timer operates for the next showing.	Stopping the event timer applies *only* to the current showing of the program.	To stop all operations of a repeated event timer, you *must* delete the event timer. **Note:** The receiver deletes a *Once* event timer when it operates.
You are testing a VCR code to see if the receiver controls a VCR. The VCR does not do the test.	The VCR may not be turned ON, there may not be a tape inserted, the tape may not be rewound, or the write-protect tab on the tape may have been removed. The code you are testing may not be valid for the VCR.	Make sure the VCR is turned ON, with a blank tape inserted on which you want to record, that the tape is rewound, and that the write-protect tab on the tape is intact. Try another VCR code from the **VCR Codes** table (see page page 97).
You set up a *VCR Event Timer*, but the VCR does not record the program you want.	You may not have turned the VCR ON, inserted a tape, or rewound the tape. Or, the write-protect tab on the tape may have been removed. If you use the receiver back panel RF or VHF connections in the wiring setup, you may not have set the receiver channel 3/4 setting and both the VCR modulator output and viewing channel to either 3 or 4. There may be obstacles between the receiver and the VCR. If you set up the *VCR Event Timer* using the **Create an Event Timer** menu, you may have selected an *Auto-Tune*, *Reminder*, or *PVR* timer instead of a *VCR* timer. If you did select a *VCR* timer, you may have selected an inappropriate timer frequency. If you set up the *VCR Event Timer* using the quick record feature, the timer was one-time only, and may have missed another showing of the program.	Make sure the VCR is turned ON, with a tape inserted on which you want to record, that the tape is rewound, and that the write-protect tab on the tape is intact. If you use the RF or VHF connections, you *must* set the receiver channel 3/4 setting and *both* the VCR modulator output *and* viewing channel to either 3 or 4. Remove any obstacles between the receiver and the VCR. When you set up a *VCR Event Timer*, make sure to select the *VCR* option in the **Timer Type** list on the **Create an Event Timer** menu. Also, make sure to select the proper option in the **Timer Frequency** list on this menu. Remember that you can set up only a *Once* (one-time only) timer using the quick record feature.
You edit an *automatic* event timer. The timer does not start or does not end according to the program for which you set the timer.	Editing an *automatic* event timer *converts* it to a *manual* event timer. Such a timer starts and stops at the times you specify, *not* the start and stop times of any specific program.	If you want an *automatic* event timer to start and stop according to a specific program, avoid editing that event timer.
You try to set up a *manual* event timer. The receiver displays an **Error** message.	You may have tried to set a *manual* event timer with invalid start or stop times.	Review the rules on start and stop times for *manual* event timers.
The receiver does not display the program name for a *manual* event timer.	The receiver may not be able to display a program name for a *manual* event timer.	Use the **Program Guide** or a printed schedule to find the program name.
You set an event timer. The event timer misses the beginning or the end of a program.	The program may have started a little earlier than scheduled, or it may have run over its scheduled ending time.	Use the **Start 1 min. early** option to start any event timer one minute early, except for a pay per view event. Use a manual event timer to start any event timer at the times you set yourself, except for a pay per view event.

DEVICE CODES

These tables contain the manufacturer codes for programming the remote to control your TV, a VCR, DVD player, cable box, or audio amplifier. Every attempt has been made to include all codes. If your device brand is not listed or if the codes to not work, the remote may not control your device. In some cases codes may operate some but not all buttons shown in this guide.

TV CODES

TELEVISION	CODES
Admiral	514, 521
Akai	532, 570, 573
Alba	613
A-Mark	620
Amstrad	533
Anam	509, 541, 620, 621, 691,698
AOC	505, 506, 519, 520, 620, 695, 712
Archer	620
Audiovox	620
Bauer	611
Baycraft	536
Brockwood	695
Broksonic	562, 691
Candle	506, 522, 523, 525, 536, 691, 695, 712
Capehart	519, 695
Circuit City	695
Citizen	506, 516, 522, 523, 524, 525, 526, 691, 712
Colortyme	573, 695
Concerto	523
Contec	527, 528, 541, 591, 691
Craig	536, 541, 691, 694
Crown	526, 536
Curtis Mathes	506, 516, 526, 573, 703, 712, 708
CXC	541, 691
Daewoo	505, 524, 526, 529, 530, 531, 532, 698, 712, 719
Daytron	526, 695
Dixi	532, 588, 620
Dumont	695
EchoStar	722
Electrohome	526, 573, 709, 713
Elta	532
Emerson	526, 527, 528, 533, 534, 535, 536, 537, 538, 539, 540, 541, 573,622, 691, 692, 695, 696, 699, 720,
Envision	506, 712
Etron	532
Fisher	542, 590
Formenti	611
Fortress	573, 605
Fujitsu	534, 694
Funai	534, 541, 691, 694
Futuretech	541, 691, 694
General Electric (GE)	503, 508, 509, 515, 540, 543, 544, 630, 695, 698, 701,714, 715, 716
Genexxa	613
Goldstar	505, 523, 526, 545, 546, 573, 588, 693, 712
Granada	695, 711
Grand	695
Grandiente	711
Grundig	547
Hallmark	695
Harmon Kardon	561
Hinari	534
Hitachi	523, 526, 548, 549, 550, 551, 552, 553, 554, 555, 585, 597, 626, 702, 718
Infinity	566
JBL	566
JC Penney	503, 505, 506, 516, 526, 531, 543, 596, 701, 714
Jenson	556, 573
JVC	557, 558, 559, 560
Kawasho	548, 561, 712
Kenwood	506, 573, 712
Kloss	522, 561, 610, 698
KTV	526, 539, 540, 541, 691, 696, 712
Lloyds	695
Lloytron	526
Loewe	588
Logik	518
Luxman	523
LXI	503, 563, 566, 590, 595, 617, 625, 701
Magnasonic	573
Magnavox	506, 520, 525, 536, 564, 565, 566, 567, 568, 569, 573, 575, 610, 710, 712
Marantz	506, 566, 573, 588, 712
Matsui	532, 609
Megatron	695
Memorex	518, 532, 590, 695, 720
MGA	504, 505, 506, 571, 573,695
Mitsubishi	504, 505, 570, 571, 572, 597, 623, 695, 705, 707, 712
MTC	505, 506, 516, 523, 531, 695, 712
NAD	502, 617, 695
National	509, 697,698
National Quenties	697

TELEVISION	CODES
NEC	505, 506, 507, 517, 523, 573, 627, 712
Nikkai	612, 613, 618
Nordmende	551
Normandic	717
Novabeam	561, 698
Nyon	701
Onwa	541, 691
Optonica	605, 607
Orion	694
Osaki	612
Panasonic	508, 509, 510, 511, 512, 566, 574, 685, 686,687,689, 697, 698, 700, 706, 714, 716
Philco	505, 506, 525, 536, 564, 565, 568, 573, 610, 712
Philips	566, 588
Pioneer	502, 548, 551, 576, 708
Portland	505, 526, 712
Proscan	503
Proton	513, 519, 526, 536, 585, 624, 695
Pulsar	501
Quasar	508, 509, 577, 698, 700
Radio Shack	526, 541, 607, 612, 691, 698
RCA	503, 505, 515, 548, 579, 580, 581, 582, 583, 584, 586, 587, 625, 633, 634, 691, 698, 701, 708, 714, 715, 716
Realistic	590
Saba	551
Saisho	532, 533, 609
Sampo	506, 519, 698
Samsung	505, 506, 516, 523, 526, 532, 588, 612, 695, 704, 712, 721
Samwon	620
Sanyo	542, 589, 590, 591, 592, 609

TELEVISION	CODES
SBR	588
Schneider	588
Scott	526, 534, 537, 541, 593, 600, 691,696, 701
Sears	503, 523, 534, 542, 563, 589, 590, 594, 595, 596, 598, 599, 601, 602, 603, 604, 617, 695, 703
Seimitsu	695
Sharp	526, 585, 591, 605, 606, 607, 608, 628, 629
Siemens	591
Signature	518
Silver	573
Solavox	612
Sony	500, 578, 609, 619, 622, 690
Soundesign	525, 536, 541, 691, 695
Spectricon	520, 620
Squareview	694
SSS	505, 541, 573, 691, 712
Supra	523
Supre-Macy	522
Sylvania	506, 525, 536, 564, 565, 566, 568, 573, 575, 600, 610, 611, 712
Symphonic	632, 692, 694
Tandy	605, 613
Tatung	509, 698
Technics	508
Techwood	523, 573
Teknika	504, 505, 516, 518, 522, 523, 524, 525, 526, 534, 536, 541, 614, 615, 686, 691, 712
Teleavia	551
Telefunken	551
Teletech	532
Tera	513
Thomas	695

TELEVISION	CODES
Thompson	709
Thomson	551, 616
TMK	523, 573, 695
Toshiba	516, 590, 596, 617, 618, 631, 688
Tosonic	528
Totevision	526
Toyomenko	695
Universal	543
Vector Research	506
Victor	557
Video Concepts	570, 691
Vidtech	505, 695, 712
Viking	522
Wards	505, 506, 515, 518, 534, 536, 543, 564, 565, 567, 568, 607, 619, 712, 714, 715
Yamaha	505, 506, 712
York	695
Zenith	501, 518, 693
Zonda	620

VCR CODES

VCR	CODES
Aiwa	588, 622, 623, 624
Akai	513, 514, 515, 516, 517, 518, 519, 520, 568,
Alba	546
Amstrad	588
ASA	565
Audio Dynamics	594, 600
Broksonic	559
Bush	589
Candle	580, 592, 593
Canon	542, 553, 554
Capehart	543, 546
Citizen	591, 592, 593
Craig	591, 608

VCR	CODES
Croslex	553
Curtis Mathes	554, 592, 605
Daewoo	534, 545, 546, 547, 593
Daytron	546
DBX	594, 600
Dumont	549
Dynatech	588
Electrohome	609
Emerson	505, 506, 507, 508, 509, 510, 511, 512, 559, 568, 588, 590, 609, 618
Finlandia	549
Finlux	549, 565, 588
Fisher	548, 549, 584, 588, 608, 610
General Electric (GE)	550, 551, 552, 554, 572, 591, 605
Goldstar	530, 555, 592, 612, 613
Goodmans	585, 589
Go Video	557 558, 620
Granada	549, 581
Grundig	565
Harmon Kardon	530, 569
Hinari	589
Hitachi	536, 537, 538, 539, 540, 541, 553, 588, 595, 596, 597
Instant Replay	553
ITT	518
JC Penney	530, 554, 580, 591, 594, 600, 601
Jenson	560
JVC	561, 562, 563, 564, 592, 594, 600, 601
Kenwood	562, 581, 592, 594, 600, 601
Lloyd	588
Logik	589
Luxor	518

VCR	CODES
Magnavox	527, 553, 554, 556, 565, 611
Marantz	530, 554, 565, 585, 592, 594, 600, 601, 603
MEI	554
Memorex	533, 549, 554, 566, 581, 585, 588, 608
MGA	567, 568, 609
Mitsubishi	562, 567, 568, 569, 570, 571, 609
MTC	544, 580, 588
Multitech	588, 589, 591
NAD	573
NEC	530, 531, 532, 562, 592, 594, 599, 600, 601, 602, 603, 604
Olympic	553
Optonica	585
Orion	506, 507
Panasonic	521, 522, 523, 524, 526, 553, 554, 598, 614, 628
Pentax	537, 592
Perdio	588
Philco	553, 554, 611
Philips	553, 554, 565, 585
Pioneer	553, 562, 573, 574, 575, 576, 600
Portland	546, 593
Proscan	553, 605
Pulsar	533
Quartz	581
Quasar	553, 554, 577, 578
Radio Shack	607, 608, 609, 610
RCA	525, 526, 527, 528, 529, 537, 553, 591, 605, 606, 615, 630, 631
Realistic	549, 554, 580, 581, 584, 585, 588
Ricoh	502
Saisho	506, 507
Salora	567, 581

VCR	CODES
Samsung	517, 534, 579, 580, 591
Sansui	532, 544, 562, 600, 621
Sanyo	549, 581, 582, 583, 608
SBR	565
Schneider	589
Scott	508, 559, 590
Sears	548, 549, 581, 584, 608, 610,
Sentra	546
Sharp	585, 607, 609, 625
Shintom	589
Sony	500, 501, 502, 503, 504
Sylvania	553, 554, 556, 567, 588, 611
Symphonic	588, 594
Tandy	588
Tashiko	588
Tatung	586, 594, 601
Teac	588, 594, 601
Technics	553, 554
Teknika	554, 587, 588
TMK	506
Toshiba	534, 535, 567, 590
Totevision	580, 591
Unitech	580
Vector Reaserch	530, 600
Victor	561, 562, 600
Video Concepts	568, 600
Videosonic	591
Wards	527, 554, 580, 585, 588, 589, 590, 591, 607, 608, 609
Yamaha	530, 592, 594, 600, 601
Zenith	500, 501, 533

DVD Player Codes

DVD Players	Codes
Aiwa	634
Hitachi	632, 635
JVC	636
Konka	637, 638
Magnavox	626
Mitsubishi	629
Panasonic	639
Philips	640, 641, 642
Pioneer	619
RCA	627
Sanyo	643
Sony	617, 644, 645
Toshiba	616, 646, 647
Zenith	648

Tuner/Amplifier Codes

Tuner/Amplifier	Codes
Aiwa	656, 680, 687, 718, 719, 720, 723, 724, 725, 726
Carver	653, 706
Citizen	709
Denon	674
Fisher	653, 706
GE	665, 711
Goldstar	677, 690
Harmon Kardon	672
Hitachi	717
JVC	657, 683, 703, 727
Kenwood	676, 691, 728
Luxman	681, 686
LXI	665
Magnavox	705
Marantz	708
Memorex	675, 692
NAD	669, 696
Nakamichi	671, 694
NEC	716
Onkyo	660, 662, 678, 689, 699, 700
Optimus	664, 697
Panasonic	652, 707
Pioneer	658, 661, 667, 668, 675, 679, 688, 692, 702
Proton	654, 705
Quasar	652, 707
RCA	655, 704, 729
Realistic	665, 666
Scott	659, 701
Sharp	712, 713, 714, 715
Sherwood	670, 695
Sony	673, 680, 687, 693, 730, 731
Symphonic	666
Teac	684
Technics	652, 658, 707
Toshiba	710
Victor	657, 703
Yamaha	663, 682, 685, 698, 732, 733

Cable Boxes

Cable Boxes	Codes
Eastern	649
CI/Tocom	640
Jerrold	635, 636
Memorex	637
Oak	646
Panasonic	637, 644, 645
Paragon	637
Pioneer	642, 643
Regency	649
Scientific America	638, 639. 647, 648, 650
Zenith	641

Notes

APPENDIX

LIMITED WARRANTY

This **Limited Warranty** is a legal document. Keep it in a safe place. Remember to retain your Bill of Sale for warranty service! Any items returned without a copy of the Proof of Purchase will be considered out of warranty.

WHAT THE WARRANTY COVERS

This warranty extends *only* to the original user of the equipment and is limited to the purchase price of each part. EchoStar Communications Corporation and its affiliated companies ("EchoStar") warrant this system against defects in materials or workmanship as follows:

- **LABOR**: For a period of one (1) year from the original date of purchase, if EchoStar determines that the equipment is defective subject to the limitations of this warranty, it will be replaced at no charge for labor. EchoStar warrants any such work done against defects in materials or workmanship for the remaining portion of the original warranty period.
- **Parts**: For a period of one (1) year from the original date of purchase, EchoStar will supply, at no charge, new or re-manufactured parts in exchange for parts determined to be defective subject to the limitations of this warranty. EchoStar warrants any such replacement parts against defects in materials or workmanship for the remaining part of the original warranty period. **Note**: "Parts" means items included in this package, which may include the satellite dish assembly, receiver, LNBF, remote control, or dish mounting hardware. It does *not* include other parts purchased separately.

WHAT THE WARRANTY DOES NOT COVER

- This warranty *does not cover* replacement of lost or damaged Smart Cards.
- This warranty *does not cover* installation of the system. If applicable, such installation will be warranted under a separate installation agreement.
- This warranty *does not cover* consumer instruction, physical setup or adjustment of any consumer electronic devices, remote control batteries, signal reception problems, loss of use of the system, or unused programming charges due to system malfunction.
- This warranty *does not cover* cosmetic damage, damage due to lightning, electrical or telephone line surges, fire, flood, or other acts of Nature, accident, misuse, abuse, repair or alteration by other than authorized factory service, use of accessories not recommended by the receiver manufacturer, negligence, commercial or institutional use, or improper or neglected maintenance.
- This warranty *does not cover* equipment sold AS IS or WITH ALL FAULTS, **shipping and handling**, removal or reinstallation, shipping damage if the equipment was not packed and shipped in the manner prescribed, nor equipment purchased, serviced, or operated outside the continental United States of America.

LEGAL LIMITATIONS

REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS YOUR EXCLUSIVE REMEDY. ECHOSTAR SHALL NOT BE HELD LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESSED OR IMPLIED WARRANTY ON THIS SYSTEM, NOR FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF, OR INABILITY TO USE, THIS SYSTEM. UNDER NO CIRCUMSTANCES SHALL ECHOSTAR'S LIABILITY, IF ANY, EXCEED THE PURCHASE PRICE PAID FOR THIS SYSTEM. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS SYSTEM IS LIMITED IN DURATION TO THE PERIOD OF THIS WARRANTY. ECHOSTAR RESERVES THE RIGHT TO REFUSE TO HONOR THIS WARRANTY IF ECHOSTAR DETERMINES ANY OF THE ABOVE EXCEPTIONS TO HAVE CAUSED THIS SYSTEM NOT TO HAVE PERFORMED PROPERLY. THIS WARRANTY SHALL BE VOID IF ANY FACTORY-APPLIED IDENTIFICATION MARK, INCLUDING BUT NOT LIMITED TO SERIAL OR CONDITIONAL ACCESS NUMBERS, HAS BEEN ALTERED OR REMOVED. THIS WARRANTY SHALL ALSO BE VOID IF THE RECEIVER HAS BEEN OPENED BY AN UNAUTHORIZED PERSON.

IF YOU NEED ASSISTANCE

1. Call the Customer Service Center at 1-800-333-3474. Have the date of purchase and either your customer account number, the receiver conditional access number, or the receiver model number ready. Display the **Important System Information** menu to find these numbers.
2. A Customer Service Representative will assist you.
3. If the Representative determines you should return any equipment, you will be directed to call a Return Authorization representative. *Before shipping* any equipment, you *must* talk to a Return Authorization representative and *must* obtain a Return Authorization (RA) number.
4. You will be given the appropriate address for which to return your equipment. Whether under warranty or not, you will be responsible for the cost of shipping back the defective equipment. For faster service, see the *Advance Exchange Program* below.
5. Returned equipment must be packaged properly, using either the original shipping materials or the packaging in which the replacement equipment is shipped. Include a copy of the Bill of Sale. *Any items returned without a copy of the Proof of Purchase will be considered out of warranty.* Follow the instructions given to you by the Customer Service Representative.
6. Write the RA number in large, clearly visible characters on the outside of the shipping box that you use to return the equipment. *To avoid confusion and misunderstandings, shipments without an RA number clearly visible on the outside of the box will be returned to you at your expense*.
7. If you return the receiver, you *must* return the Smart Card with the receiver. If you do not return the Smart Card with the receiver, a fee will be assessed against your account.

ADVANCE EXCHANGE PROGRAM

The Advance Exchange Program allows you to have replacement equipment shipped immediately to you (depending upon where you live, it could take three to five business days). Along with replacement equipment, you will receive a prepaid shipping label and instructions on how to return the defective equipment.

The shipping charge, for receiving replacement equipment and returning the defective equipment, is a one-time fee based on EchoStar's competitive bulk shipping rates (additional charges may apply outside of the continental US). This fee will be charged to your billing account or your valid credit card.

If you do not ship the defective equipment to EchoStar within ten days after receiving the replacement, your billing account or credit card will be charged the market price of the replacement. If you return the defective equipment *after* ten days, you will receive a full refund less an administrative fee.

If your equipment is out of warranty and can be repaired your billing account or credit card will be charged the standard repair fee for the replacement. If damage to the defective equipment is found, which EchoStar in its sole discretion determines has voided the warranty, or makes the equipment unrepairable, billing account or credit card will be charged the market price of the replacement.

POST RECEIPT EXCHANGE PROGRAM

You may choose to ship the equipment to us at your cost. To provide faster service, upon receipt of your equipment you will be shipped a replacement. Your original equipment will not be available for return.

The equipment you return will be checked to verify whether it is covered under this warranty. If the defective equipment is covered under this warranty, it will be replaced and shipped back to you at no additional cost (additional charges may apply outside of the continental US).

If your equipment is out of warranty and can be repaired your billing account or credit card will be charged the standard repair fee for the replacement. If damage to the defective equipment is found, which EchoStar in its sole discretion determines has voided the warranty, or makes the equipment unrepairable, your billing account or credit card will be charged the market price of the replacement.

ACCESSORY WARRANTY

An accessory is any DISH Network branded equipment, displaying the DISH Network logo, excluding the receiver, Smart Card, cables and hookups, and non-mechanical components. A one-year warranty becomes effective upon the activation of the DISH system or date of purchase, if bought separately. A proof of purchase is required to verify the purchase date. If an accessory has an expired warranty, no exchange will be issued. You may purchase replacement accessories from DISH Network or your local retailer.

RESIDENTIAL CUSTOMER AGREEMENT

Effective as of September 1, 2001 until replaced.

THIS DOCUMENT DESCRIBES THE TERMS AND CONDITIONS UNDER WHICH DISH NETWORK WILL PROVIDE ITS SERVICE TO YOU. IF YOU DO NOT ACCEPT THESE TERMS AND CONDITIONS, PLEASE NOTIFY US IMMEDIATELY AND WE WILL CANCEL YOUR SERVICE. IF YOU ARE A NEW DISH NETWORK CUSTOMER, YOUR ACTIVATION OF A DISH NETWORK ACCOUNT AND RECEIPT OF DISH NETWORK SERVICES SHALL CONSTITUTE YOUR ACCEPTANCE OF THIS AGREEMENT AND ITS TERMS AND CONDITIONS WILL BE LEGALLY BINDING UPON YOU.

IF YOU ARE AN EXISTING DISH NETWORK CUSTOMER, YOUR CONTINUED RECEIPT OF DISH NETWORK SERVICES FOLLOWING RECEIPT OR PUBLICATION BY DISH NETWORK ON ITS WEB SITE OF THIS AGREEMENT SHALL CONSTITUTE YOUR ACCEPTANCE OF ITS TERMS AND CONDITIONS, AND, ACCORDINGLY, THEY WILL BE LEGALLY BINDING ON YOU.

Thank you for choosing DISH Network for your television service provider.
DISH Network is happy to answer any questions you may have and to provide you with technical and other customer support through the following toll-free number and email address:

1-800-333-DISH

feedback@echostar.com

or you may write to:

DISH Network
Customer Service Center
P.O. Box 33577
Northglenn, CO 80233

and, for general knowledge, try our website at **www.dishnetwork.com**.

“Dish Network” is a trademark of EchoStar Satellite Corporation.

1. THE DISH NETWORK SERVICE.

A. Services Defined. DISH Network offers a wide variety of video and audio programming and other services and we are constantly striving to add new services to our lineup. For purposes of this Agreement the term "Services" shall mean the programming available on DISH Network (whether subscription based or pay per view based) and any other services that we may provide to consumers either now or in the future. For purposes of this Agreement the terms "You" or "Your" refer to you, the DISH Network subscriber.

B. Programming Changes.Except as otherwise set forth in this Agreement, you may change your programming selection at any time by notifying us. A fee may apply to such changes (Change of Service Fee). In addition, you may be charged a fee (Service Access Fee) if you fail to subscribe to one of DISH Network's basic programming packages which include America's Top 50, America's Top 100/ CD, America's Top 150, DISH Latino or DISH Latino Dos.

C. Programming Availability.Certain Services transmitted by us, including but not limited to some subscription Services, sporting events and broadcast network Services, may be blacked out in your area of reception. If you circumvent or attempt to circumvent any of these blackouts, you may be subject to legal action. You must be at least 18 years of age, or the applicable age of majority where you reside, in order to receive adult-oriented programming services.

D. Ordering Pay Per View.You may order DISH Network pay-per-view Services by using your on-screen Program Guide and remote control unit to select the movies and other events we offer. To order DISH Network pay-per-view Services, your DISH Network DBS digital receiver must be connected to a telephone outlet. You may also order DISH Network special events and pay-per-view Services over the telephone by calling the Customer Service Center or by using our automated system through the following toll free number:

1-877-DISH-PPV (3474-778) for ordering movies

A small fee will apply for use of the automated system (Pay-Per-View Automated Fee) or the Customer Service Center (Pay-Per-View Fee).

E. Private Viewing. DISH Network provides Services to you for your private home viewing, use and enjoyment. You agree that the Services provided will not be viewed outside of your private residence. You are permitted to exhibit the Services solely in your private residence and not in any other areas. The Services may not be rebroadcast, transmitted, recorded or performed, nor may admission be charged for listening to or viewing any Services provided by us. If we later determine that you utilized your DISH Network Equipment (including any additional DISH Network receivers) or sold, leased or otherwise gave possession of the same to a third party who you knew or reasonably should have known intended to use it to permit the viewing of the Services in a commercial establishment or any other area open to the public, we may terminate the Services and in addition to all other applicable fees, you agree to pay us the difference between the price actually paid for the Services and the full commercial rate for such Services, regardless of whether we have or had the commercial rights to such Services. The payment of that amount and/or the termination of Services shall not prejudice our ability to exercise any other rights and remedies we may have under this Agreement, at law, in equity, or otherwise.

F. Additional Receivers.To independently tune additional televisions within your home, a separate DISH Network receiver is required for each television. DISH Network will allow you to place up to five additional receivers on your account. Each additional receiver would be authorized to receive the same Services as your initial receiver. DISH Network will charge you a reduced monthly fee (Additional Receiver Authorization Fee) for each additional receiver added to your account. This option is only available if your initial DISH Network receiver and all additional receiver(s) are located at the same residence and are continuously connected to the same telephone line. If you desire to receive Services at two different locations, you must open a separate account for each location. You agree that you will not directly or indirectly use a single account for the purpose of authorizing Services for multiple DISH Network receivers that are not all located in the same residence and connected to the same phone line. If we later determine that you did, we may terminate your Services and, in addition to all other applicable fees, you agree to pay us the difference between the amounts actually received by us and the full retail price for the Services authorized for each DISH Network DBS receiver on the account, whether owned by you or not. The payment of that amount and/or the termination of Services shall not prejudice our ability to exercise any other rights and remedies we may have under this Agreement, at law, in equity, or otherwise.

G. Changes in Services offered.DISH Network reserves the right to change the Services that we offer, and our prices or fees related to such Services at any time. If the change affects you, we will provide you notice of the change and its effective date. The notice may be provided on your billing statement or by other communication permitted under Section 9B. In the event of a change in the contents of any programming, programming packages or other Services, you understand and agree that we have no obligation to replace or supplement the programming, programming packages or other Services previously offered that have been deleted, rearranged or otherwise changed. You further understand and agree you will not be entitled to any refund because of a change in the contents of any programming, programming packages, or other Services previously offered.

H. Multi-Month Subscriptions.For multi-month subscriptions, you may downgrade the Services only at the time of renewal. You may not downgrade the Services during the term of the multi-month subscription.

2. BILLING POLICIES AND PAYMENTS FOR SERVICES

A. You agree to pay all amounts billed for Services and to pay all taxes, fees and other charges, if any, which are now or may in the future be assessed on the Services you receive from us. Unless you prepay for a multi-month subscription to Services, we will bill you each month, in advance, for Services ordered by you or anyone who uses your DISH Network Equipment, whether with or without your permission, until you cancel the Services. The bills you receive will show the total amount due, the payment due date, payments, credits, purchases and other charges to your account.

B. You agree to pay us in full monthly by the payment due date for the Services and for any other charges due us, including any fees set forth in this Section 2. Payment of your bill after the due date will result in you paying us a Late Payment Fee. Other fees and charges may also be assessed. If partial payments are made, they will be applied first to the oldest outstanding bill. If you send checks or money orders marked "payment in full," we can accept them without losing any of our rights to collect any other amounts owed by you, notwithstanding your characterization of the payment. DISH Network does not extend credit to our customers, and the Late Payment Fee is not interest, a credit service charge or a finance charge. You understand and agree that in the case of late payment or nonpayment for any Services ordered by you or for any of the charges stated below, we may report such late payment or nonpayment to credit reporting agencies. If you do not pay your bill by the due date, we have the right to disconnect your Services at any time thereafter, in our sole discretion. DISH Network may require you to pay all past due charges, a Reconnect Fee, a deposit equal to a minimum of one month's advance charges and all outstanding balances accrued through the date of deactivation, before we reconnect your Services. Deposits will not be held segregated from other funds and shall not earn or accrue interest.

C. If you at any time fail, neglect, or refuse to make timely payments hereunder, or if a petition in bankruptcy shall be filed on your behalf or against you, or if you take advantage of any insolvency law or become insolvent or make an assignment for the benefit of creditors, or if a receiver, liquidator, or trustee is appointed for your property or affairs, we shall be wholly relieved from our obligations hereunder.

D. If you paid for an annual or other multi-month subscription to any Services and your account is past due for any amounts owed to us, at our option we may suspend any or all Service until payment is received, and/or convert your annual or other multi-month subscription to a monthly subscription. If we convert your multi-month subscription to a monthly subscription, we will first apply the amount you paid for your multi-month subscription to any past due amounts and then any remaining amounts to future obligations. If we elect to offset the amount paid for the remaining portion of a multi-month subscription against amounts past due, you agree to pay, in addition to all other applicable fees, the Offset Fee set forth below for each month and partial month that the multi-month subscription was previously received.

E. If we use a collection agency or attorney to collect money you owe us or to assert any other right which we may have against you, you agree to pay the reasonable costs of collection or other action. These costs might include, but are not limited to, the costs of a collection agency, reasonable attorney's fees and court costs. If there are billing errors or other requests for credit, you can contact our Customer Service Center by telephone or in writing. You must contact us within sixty (60) days of the time you receive the billing statement for which you are seeking corrections. Failure to timely notify us of a dispute shall constitute acceptance of the bill. Undisputed portions of the billing statement must be paid before the next billing statement is issued to avoid an administrative fee for late payment. All payments for Services must be made directly by you to us. DISH Network shall have no obligation to provide Services for which payment is made by you to a third party.

F. In addition to the amounts due for Services, you agree to pay the fees referenced below ("Fees") when applicable. DISH Network reserves the right to increase these Fees or add additional Fees in the future, in our sole discretion.

Smart Card Replacement Fee	$50.00
Additional Receiver Authorization Fee (monthly, per receiver)	$4.99
Late Payment Fee	$5.00
Change of Service Fee	$5.00
Duplicate Billing Statement Fee	$2.00
Overnight Delivery Fee	$18.00
Restart Fee	$25.00
Returned Payment Fee	$25.00
Service Access Fee (monthly)	$5.00
Offset Fee	$2.00
Ledger Request Fee	$5.00
Pay-Per-View Automated Fee	$1.00
Pay-Per-View Fee	$5.00

3. CANCELLATION OF SERVICE

A. Your Service will continue until cancelled as provided for herein. Your subscription will be automatically renewed unless you contact us to cancel as provided for in the next paragraph.

B. You have the right to cancel your Service for any reason at any time by notifying us via telephone or in writing at the phone number or address set forth on page 1, above. Please be aware that certain promotional offers have a minimum subscription commitment (usually 12 months) and if you cancel your service prior to the expiration of that commitment, certain early termination fees may apply.

C. DISH Network has the right to terminate your Services at any time without providing notice to you if: (i) you fail to pay your bill when it is due; (ii) we receive confirmation that you have received the Services, or any part of the Services without paying for them; or (iii) you otherwise violate the terms of this Agreement.

D. If you Service is canceled for any reason, you are still responsible for payment of all outstanding balances accrued, including any applicable Fees.

E. You understand that charges for Services, once charged to your account, are nonrefundable. For monthly subscriptions, the cancellation will be effective at the end of the period covered by the last monthly bill. No refunds or credits will be provided in connection with the cancellation of monthly subscriptions. For annual or other multi-month subscriptions, the cancellation will be effective as of the date the multi-month subscription expires. Because you are receiving a discounted price in exchange for your agreement to pay for your services on an annual or other multi-month basis, in the event you cancel the Services prior to expiration of your multi-month subscription, you understand and agree that you are not entitled to any refund or credit for the unused portions of the multi-month subscription and that we have the right to retain any prepaid monies as liquidated damages.

4. EQUIPMENT

A. In order to receive the Services it will be necessary for you to purchase or lease certain reception equipment consisting primarily of a DISH Network compatible satellite receiver, a satellite antenna, LNBF unit and remote control (“Equipment”). You will also be provided with a conditional access card (“Smart Card”) that is inserted into your satellite receiver. The Smart Card remains the property of EchoStar Communications Corporation, the corporate parent of DISH Network and any tampering or other unauthorized modification to the Smart Card is strictly prohibited and may result in, and subject you to, legal action. You agree to return the Smart Card to us upon request.

B. Smart Cards are nontransferable. Your Smart Card will only work in the DISH Network receiver to which it was assigned by DISH Network. If you report to the Customer Service Center that your Smart Card was lost, damaged, defective or stolen we will replace it, as long as there is no evidence of unauthorized tampering or modification. A replacement fee will apply. In addition, in order to minimize downtime for your Equipment, DISH Network will, upon your request, deliver a replacement Smart Card to you via overnight delivery. Our Overnight Delivery Fee will apply.

C. DISH Network reserves the right to alter software in your DISH Network receiver, an provide content to PVR products, through periodic downloads. DISH Network will use commercially reasonable efforts to schedule these downloads in a manner that result in the least amount of interference with or interruption to your Service.

D. Your DISH Network receiver contains certain components and software which are proprietary to DISH Network. You agree that you will not try to reverse-engineer, decompile or disassemble any software or hardware contained within your receiver or our Smart Card. Such actions are strictly prohibited and may result in the termination of your Services and/or legal action.

E. For proper operation of your Equipment, DISH Network requires that you connect each DISH Network receiver on your account to a telephone line. For accounts containing multiple receivers, each receiver must be connected to the same telephone line.

F. If your DISH Network Equipment is stolen or otherwise removed from your premises without your authorization, you must notify our Customer Service Center immediately, but in any event not more than three (3) business days after such removal to avoid liability for payment for unauthorized use of the DISH Network Equipment. You will not be liable for unauthorized use after we have received your timely notification.

5. LEASED EQUIPMENT

A. If you decide to lease your Equipment from DISH Network, such Equipment shall at all times remain the sole and exclusive property of DISH Network and we will have the right, at our discretion, to replace it with new or reconditioned equipment and to remove the equipment upon termination of Services. None of the equipment shall be deemed fixtures or part of your realty. Our ownership of the equipment may be displayed by notice contained on the equipment. You shall have no right to pledge, sell, mortgage, give away or remove, relocate, alter or tamper with the equipment (or any notice of our ownership thereon) at any time. Any reinstallation, return of or change in location of the equipment shall be performed by us at the service rates in effect at the time of service. You shall not attach any electrical or other devices to or otherwise alter the equipment without our prior written consent. DISH Network shall have the right to make such filings as are necessary to evidence our ownership rights in the equipment, and you agree to execute any and all documents as are necessary for us to make such filings. Upon termination of Services, you must notify our Customer Service Center to schedule the return the Equipment.

B. You shall notify us promptly of any defect in, damage to, or accident involving the equipment. All maintenance and repair of the equipment shall be performed by us or our designees. DISH Network may charge you for any repairs that are necessitated by any damage to, or misuse of, the Equipment.

6. TRANSFER OF ACCOUNT, SERVICES OR EQUIPMENT

DISH Network may sell, assign or transfer your account to a third party without notice to you. You may not assign or transfer your Services without our written consent which will not be unreasonably withheld. We may, however, refuse to allow you to assign or transfer your Services if you lease your Equipment or if your account has an outstanding balance.

7. LIMITATION OF OUR LIABILITY

A. WE WILL NOT BE LIABLE FOR ANY INTERRUPTIONS IN SERVICE OR LIABLE FOR ANY DELAY OR FAILURE TO PERFORM, IF SUCH DELAY OR NONPERFORMANCE ARISES IN CONNECTION WITH THE TERMINATION OF ALL OR A PORTION OF THE SERVICES, THE RELOCATION OF ALL OR A PORTION OF THE SERVICES TO DIFFERENT SATELLITE(S), A CHANGE IN THE FEATURES AVAILABLE WITH YOUR DISH NETWORK DBS EQUIPMENT OR ANY ACTS OF GOD, FIRES, EARTHQUAKES, FLOODS, POWER OR TECHNICAL FAILURE, ACTS OF ANY GOVERNMENTAL BODY OR ANY OTHER CAUSE BEYOND OUR CONTROL. WE WILL NOT BE LIABLE FOR ANY DAMAGE RESULTING FROM LOSS OF RECORDED MATERIAL OR THE PREVENTION OF RECORDING DUE TO ANY FAULT, FAILURE, DEFICIENCY OR DEFECT IN SERVICES OR EQUIPMENT. WE MAKE NO WARRANTY, EITHER EXPRESSED OR IMPLIED, REGARDING THE DISH NETWORK DBS EQUIPMENT OR ANY SERVICES FURNISHED TO YOU. ALL SUCH WARRANTIES ARE EXPRESSLY EXCLUDED. IN NO EVENT SHALL WE HAVE ANY LIABILITY FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES RELATING TO THE DBS EQUIPMENT OR RESULTING FROM OUR FURNISHING OR FAILURE TO FURNISH ANY SERVICES OR EQUIPMENT TO YOU, OR FROM ANY FAULT, FAILURE, DEFICIENCY OR DEFECT IN SERVICES OR EQUIPMENT FURNISHED TO YOU.

B. It is your responsibility to impose any restrictions on viewing by you, other members of your household, or guests, and we shall have no liability to anyone due to or based on the content of any of the Services furnished to you.

8. WARNING AGAINST PIRACY

It is a violation of several U.S. federal and state laws to receive any Services, or any portion of such Services, without paying for them. The penalties for violating such laws can range from imprisonment to civil damage awards of up to $110,000 per violation.

9. MISCELLANEOUS

A. Physical Address/Change of Address. When setting up your DISH Network account, you agree to provide us with the physical street address where the Equipment will be located. A post office box does not constitute a physical address and is not sufficient to meet this requirement. You agree to give us prompt notice of your change of name, mailing address, physical address where the Equipment is located or telephone number. You may do this by notifying our Customer Service Center by telephone or in writing.

B. Notice. If we send you notice, it will be considered given when deposited in the U.S. Mail, addressed to you at your billing address or hand-delivered to you. Our notice to you will also be effective if provided on your billing statement or by telephone. If you give notice to us, it will be deemed given when received by us at the address listed on the first page of this Agreement.

C. Applicable Law. This Agreement, including all matters relating to its validity, construction, performance and enforcement, shall be governed by applicable federal law, the rules and regulations of the Federal Communications Commission, and the laws and regulations of the state and local area where Service is provided. These terms and conditions are subject to amendment, modification or termination if required by such regulations or laws. If any provision in this Agreement is declared to be illegal or in conflict with any law or regulation, that provision may be deleted or modified, without affecting the validity of the other provisions.

D. Other. This document contains the entire agreement between DISH Network and you, the customer, and no salesperson, installer, customer service representative, authorized retailer, or other similarly situated individual is authorized to change the terms set forth herein. DISH Network may, however, change the terms and conditions of this Agreement in the future and will notify you if that occurs. The terms of this Agreement, which either are expressly stated to survive or by their nature would logically be expected to survive termination, shall continue thereafter until fully performed.

STAY LEGAL

Title 47, Section 605(e)4, United States Code (U.S.C.) makes it a federal crime to modify this receiver to enable it to receive encrypted (scrambled) television programming without payment of required subscriptions. Conviction can result in a fine of up to $500,000 and imprisonment for five years, or both. Any owner of this receiver who procures or willfully causes its modification is an accessory to that offense and may be punishable in the same manner. Investigative authority for violations lies with the Federal Bureau of Investigation (FBI).

This product may incorporate copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of such copyright protection technology must be authorized by Macrovision, and is intended for home and other limited pay per view uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

COMPLY WITH FCC REGULATIONS

The following text is extracted from Federal Communications Commission (FCC) regulations, as of the publication date of this *Guide*. Contact the FCC (see following) or your library for the complete text of the regulations.

TELEPHONE COMMUNICATION

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the rear panel of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

REN for this equipment: **0.0**

This equipment uses the following Universal Service Order Code (USOC) jacks: RJ-11C.

An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this receiver does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

If you experience trouble with this equipment, please contact Customer Service at 1-800-333-3474 for repair and warranty information. If the trouble is causing harm to the telephone network, the telephone company may request you remove the equipment from the network until the problem is resolved.

There are no customer repairable parts inside. Any attempts to repair the receiver will void your authorization to use it.

RADIO INTERFERENCE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

Modifying this receiver may void your authority to use the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Refer to *Troubleshooting* in *Chapter 3* for a detailed description of recommended customer actions.

If none of the remedies on the previous page stops the radio interference, you should contact a licensed radio/ television technician, your satellite dealer, or call the Customer Service Center at 1-800-333-3474, for assistance.

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Write the following information in the spaces provided below. You may need to provide this information if you call the Service Center. To get the Conditional Access Numbers, display the **Important System Information** menu (see *Ordering Your Program Packages on* page 4).

Purchase Location Name:	
Purchase Location Telephone Number:	
Receiver Serial Number:	
Receiver Conditional Access Number	
Smart Card Conditional Access Number:	
FCC Ringer Equivalence Number (REN):	0.0B

Codes Programmed into Remote Control	
Remote Address (SAT Mode)	
Television Code (TV Mode)	
VCR Code (VCR Mode)	
Auxiliary Code (AUX Mode)	

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